TOSHIBA

FILE NO. 023-200509
SUPPLEMENT

SERVICE MANUAL

Projection Television

46HMX85
52HMX85
62HMX85

– SUMMARY –

46HMX85/52HMX85/62HMX85 is the same as 52HM85/62HM85 except for the parts tabled on back of this sheet.
Use this service manual together with the service manual of 52HM85/62HM85 (File No. 020-200506).

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REPLACEMENT PARTS LIST DIFFERENCES

Location No.	Parts No.	Description
#1 : [46HMX85]		
#2 : [52HMX85]		
#3 : [62HMX85]		
CAPACITORS		
C101	76797339	ELECTROLYTIC, 50V 3.3UF M
C102	76665221	ELECTROLYTIC, 10V 220UF M 3A
C105	76100102	CERAMIC CHIP, 50V F 1000PF Z
C106	76669479	ELECTROLYTIC, 50V 4.7UF M
C107	76666221	ELECTROLYTIC, 16V 220UF M
C108	76665221	ELECTROLYTIC, 10V 220UF M 3A
C109	76100104	CERAMIC CHIP, 25V F 0.1UF Z
C110	76794101	ELECTROLYTIC, 16V 100UF M
C601	76109122	CERAMIC CHIP, 50V B 1200PF K
C602	76109122	CERAMIC CHIP, 50V B 1200PF K
C603	76073084	ELECTROLYTIC, 50V 4.7UF M 3A
C604	76073084	ELECTROLYTIC, 50V 4.7UF M 3A
C605	76073086	ELECTROLYTIC, 50V 10UF M 3A
C606	76073086	ELECTROLYTIC, 50V 10UF M 3A
C607	76073053	ELECTROLYTIC, 25V 100UF M 3A
C608	76073086	ELECTROLYTIC, 50V 10UF M 3A
C612	76073054	ELECTROLYTIC, 25V 220UF M 3A
C621	76109822	CERAMIC CHIP, 50V B 8200PF K
C622	76109822	CERAMIC CHIP, 50V B 8200PF K
C661	76073084	ELECTROLYTIC, 50V 4.7UF M 3A
C662	76073086	ELECTROLYTIC, 50V 10UF M 3A
C663	76073086	ELECTROLYTIC, 50V 10UF M 3A
C665	76109103	CERAMIC CHIP, 50V B 0.01UF K
C666	76073084	ELECTROLYTIC, 50V 4.7UF M 3A
C667	76794100	ELECTROLYTIC, 16V 10UF M
C668	76105560	CERAMIC CHIP, 50V CH 56PF J
C669	76105560	CERAMIC CHIP, 50V CH 56PF J
C680	76073073	ELECTROLYTIC, 35V 2200UF M 3A
C681	76109103	CERAMIC CHIP, 50V B 0.01UF K
C682	76073082	ELECTROLYTIC, 50V 2.2UF M 3A
C683	76073053	ELECTROLYTIC, 25V 100UF M 3A
C684	76795470	ELECTROLYTIC, 25V 47UF M
⚠ C801	76503004	PLASTIC FILM, AC275V 0.47UF M
⚠ C803	76503002	PLASTIC FILM, AC275V 0.22UF M
C805	76092281	CERAMIC DISC, AC250V E 4700PF
C809	76086067	CHEMICON 200V 102M LGQ2D102MESHTL
C810	76086067	CHEMICON 200V 102M LGQ2D102MESHTL
⚠ C811	76092557	CERAMIC DISC, AC250V E 2200PF M
⚠ C812	76092557	CERAMIC DISC, AC250V E 2200PF M
⚠ C814	76092553	CERAMIC DISC, AC250V B 470PF K
⚠ C816	76092555	CERAMIC DISC, AC250V E 1000PF M
C840	76679220	ELECTROLYTIC, 250V 22UF M 3A
C841	76073043	ELECTROLYTIC, 16V 2200UF M 3A
C842	76503041	PLASTIC FILM , 63V 0.1UF J
C843	76092333	CERAMIC DISC, 2KV 100PF K
C845	76073082	ELECTROLYTIC, 50V 2.2UF M 3A
C848	76073039	ELECTROLYTIC, 16V 220UF M 3A
C861	76092342	CERAMIC DISC, 2KV R 560PF K
C862	76503045	PLASTIC FILM, 63V 0.22UF J
C863	76212221	CERAMIC DISC, 50V B 220PF K
C864	76590681	PLASTIC FILM, 50V 680PF J
C865	76073063	ELECTROLYTIC, 35V 4.7UF M 3A
C866	76820223	PLASTIC FILM, 630V 0.022UF J
C868	76073068	ELECTROLYTIC, 35V 100UF M 3A
C883	76567104	PLASTIC FILM, 50V 0.1UF J
C884	76214331	CERAMIC DISC, 500V B 330PF K
C885	76073191	ELECTROLYTIC, 35V 1500UF M 3A
C886	76214331	CERAMIC DISC, 500V B 330PF K
C887	76676470	ELECTROLYTIC, 100V 47UF M 3A
C888	76214331	CERAMIC DISC, 500V B 330PF K
C889	76073171	ELECTROLYTIC, 25V 820UF M 3A
C890	76214331	CERAMIC DISC, 500V B 330PF K
C891	76073161	ELECTROLYTIC, 16V 3900UF M 3A
C892	76214331	CERAMIC DISC, 500V B 330PF K
C893	76073173	ELECTROLYTIC, 10V 3900UF M 3A
C894	76214331	CERAMIC DISC, 500V B 330PF K
C895	76073075	ELECTROLYTIC, 35V 4700UF M 3A
C898	76503041	PLASTIC FILM , 63V 0.1UF J
C8200	76073067	ELECTROLYTIC, 35V 47UF M 3A

Location No.	Parts No.	Description
C8201	76503047	PLASTIC FILM, 63V 0.33UF J
C8202	76073169	ELECTROLYTIC, 25V 470UF M 3A
C8210	76073172	ELECTROLYTIC, 25V 1000UF M 3A
C8211	76503041	PLASTIC FILM , 63V 0.1UF J
C8212	76214221	CERAMIC DISC, 500V B 220PF K
C8213	76503041	PLASTIC FILM , 63V 0.1UF J
C8214	76617006	ELECTROLYTIC, 25V 820UF M
C8215	76073138	ELECTROLYTIC, 10V 220UF M 3A
C8220	76073068	ELECTROLYTIC, 35V 100UF M 3A
C8221	76073169	ELECTROLYTIC, 25V 470UF M 3A
C8224	76073087	ELECTROLYTIC, 50V 22UF M 3A
C8225	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8240	76073038	ELECTROLYTIC, 16V 100UF M 3A
C8241	76503047	PLASTIC FILM, 63V 0.33UF J
C8242	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8250	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8251	76567334	PLASTIC FILM, 50V 0.33UF J
C8252	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8253	76669339	ELECTROLYTIC, 50V 3.3UF M
C8905	76073002	ELECTROLYTIC, 6.3V 220UF M 3A
C8911	76503047	PLASTIC FILM, 63V 0.33UF J
C8912	76503047	PLASTIC FILM, 63V 0.33UF J
C8921	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8930	76073067	ELECTROLYTIC, 35V 47UF M 3A
C8931	76503047	PLASTIC FILM, 63V 0.33UF J
C8932	76073152	ELECTROLYTIC, 16V 330UF M 3A
C8933	76073069	ELECTROLYTIC, 35V 220UF M 3A
C8940	76073067	ELECTROLYTIC, 35V 47UF M 3A
C8941	76503047	PLASTIC FILM, 63V 0.33UF J
C8942	76073152	ELECTROLYTIC, 16V 330UF M 3A
C8943	76073069	ELECTROLYTIC, 35V 220UF M 3A
CA81	76109333	CERAMIC CHIP, 25V B 0.033UF K
CA82	76109123	CERAMIC CHIP, 50V B 0.012UF K
CA83	76109103	CERAMIC CHIP, 50V B 0.01UF K
CA84	76109333	CERAMIC CHIP, 25V B 0.033UF K
CA85	76109273	CERAMIC CHIP, 25V B 0.027UF K
CA86	76109123	CERAMIC CHIP, 50V B 0.012UF K
CA87	76109123	CERAMIC CHIP, 50V B 0.012UF K
CA88	76109333	CERAMIC CHIP, 25V B 0.033UF K
CA91	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA92	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA93	76619040	ELECTROLYTIC CHIP, 16V 10UF M 3A
CA94	76619040	ELECTROLYTIC CHIP, 16V 10UF M 3A
CA95	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA96	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA914	76619040	ELECTROLYTIC CHIP, 16V 10UF M 3A
CA915	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA916	76092730	CERAMIC CHIP, 16V B 0.1UF K
CB01	76794470	ELECTROLYTIC, 16V 47UF M
CB81	76092730	CERAMIC CHIP, 16V B 0.1UF K
CB82	76092730	CERAMIC CHIP, 16V B 0.1UF K
CB83	76092730	CERAMIC CHIP, 16V B 0.1UF K
CB99	76092730	CERAMIC CHIP, 16V B 0.1UF K
CS01	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS02	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS03	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS04	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS05	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS06	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS07	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS08	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS09	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS10	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS11	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS12	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS13	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS14	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS15	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS16	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS17 #2	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
#3	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS18 #2	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
#3	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS25	76109103	CERAMIC CHIP, 50V B 0.01UF K

Location No.	Parts No.	Description
CS26	76794470	ELECTROLYTIC, 16V 47UF M
CS27	76794220	ELECTROLYTIC, 16V 22UF M
CS28	76794100	ELECTROLYTIC, 16V 10UF M
CS29	76794100	ELECTROLYTIC, 16V 10UF M
CS30	76794100	ELECTROLYTIC, 16V 10UF M
CV01	76092621	CERAMIC CHIP, 10V B 1UF K
CV02	76092621	CERAMIC CHIP, 10V B 1UF K
CV03	76092621	CERAMIC CHIP, 10V B 1UF K
CV04	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV05	76092621	CERAMIC CHIP, 10V B 1UF K
CV06	76092621	CERAMIC CHIP, 10V B 1UF K
CV10	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV11	76092621	CERAMIC CHIP, 10V B 1UF K
CV13	76100104	CERAMIC CHIP, 25V F 0.1UF Z @U103
	76794100	ELECTROLYTIC, 16V 10UF M @UV03
CV14	76092621	CERAMIC CHIP, 10V B 1UF K @U103
	76232103	CERAMIC DISC, 50V F 0.01UF Z @UV03
CV15	76100104	CERAMIC CHIP, 25V F 0.1UF Z @U103
	76232103	CERAMIC DISC, 50V F 0.01UF Z @UV03
CV27	76762471	ELECTROLYTIC, 10V 470UF M
CV29	76763101	ELECTROLYTIC, 16V 100UF M
CV30	76092730	CERAMIC CHIP, 16V B 0.1UF K
CV38	76109102	CERAMIC CHIP, 50V B 1000PF K
CV39	76109102	CERAMIC CHIP, 50V B 1000PF K
CV47	76092621	CERAMIC CHIP, 10V B 1UF K
CV70	76794101	ELECTROLYTIC, 16V 100UF M
CV71	76092621	CERAMIC CHIP, 10V B 1UF K
CV72	76794220	ELECTROLYTIC, 16V 22UF M
CV245	76092621	CERAMIC CHIP, 10V B 1UF K
CV246	76092621	CERAMIC CHIP, 10V B 1UF K
CV247	76092621	CERAMIC CHIP, 10V B 1UF K
CV249	76092621	CERAMIC CHIP, 10V B 1UF K
CV250	76092621	CERAMIC CHIP, 10V B 1UF K
CV251	76092621	CERAMIC CHIP, 10V B 1UF K
CV253	76092621	CERAMIC CHIP, 10V B 1UF K
CV254	76092621	CERAMIC CHIP, 10V B 1UF K
CV255	76092621	CERAMIC CHIP, 10V B 1UF K
CY101	76092441	CERAMIC CHIP, 16V F 1UF Z
CY102	76665221	ELECTROLYTIC, 10V 220UF M 3A @U101
	76794101	ELECTROLYTIC, 16V 100UF M @U103
CY103	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CY104	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY105	76100102	CERAMIC CHIP, 50V F 1000PF Z @U101
	76109103	CERAMIC CHIP, 50V B 0.01UF K @U103
CY106	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY107	76794100	ELECTROLYTIC, 16V 10UF M
CY108	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CY109	76105101	CERAMIC CHIP, 50V CH 100PF J
CY111	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY112	76105181	CERAMIC CHIP, 50V CH 180PF J
CY113	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY114	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY115	76105390	CERAMIC CHIP, 50V CH 39PF J
CY116	76105470	CERAMIC CHIP, 50V CH 47PF J
CY117	76105180	CERAMIC CHIP, 50V CH 18PF J
CY160	76815393	CERAMIC CHIP, 50V B 0.039UF K
CY501	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY502	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY504	76109222	CERAMIC CHIP, 50V B 2200PF K
CY505	76105120	CERAMIC CHIP, 50V CH 12PF J
CY506	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY508	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY512	76092463	CERAMIC CHIP, 16V B 0.22UF K
CY513	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY514	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY515	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY516	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY517	76092731	CERAMIC CHIP, 16V B 1UF K
CY524	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY525	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY526	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY538	76761102	ELECTROLYTIC, 6.3V 1000UF M
CY539	76794471	ELECTROLYTIC, 16V 470UF M
CY540	76794471	ELECTROLYTIC, 16V 470UF M

Location No.	Parts No.	Description
CY541	76761102	ELECTROLYTIC, 6.3V 1000UF M
CY582	76105101	CERAMIC CHIP, 50V CH 100PF J
RESISTORS		
R010	76011102	CHIP, 1/20W 1K OHM J
R150	76011332	CHIP, 1/20W 3.3K OHM J
R151	76011562	CHIP, 1/20W 5.6K OHM J
R152	76011103	CHIP, 1/20W 10K OHM J
R173	76011103	CHIP, 1/20W 10K OHM J
R174	76011273	CHIP, 1/20W 27K OHM J
R264	76011750	CHIP, 1/20W 75 OHM J
R265	76011750	CHIP, 1/20W 75 OHM J
R266	76011750	CHIP, 1/20W 75 OHM J
R286	76011750	CHIP, 1/20W 75 OHM J
R287	76011750	CHIP, 1/20W 75 OHM J
R288	76011750	CHIP, 1/20W 75 OHM J
R347	76011101	CHIP, 1/20W 100 OHM J
R348	76011101	CHIP, 1/20W 100 OHM J
R601	76011822	CHIP, 1/20W 8.2K OHM J
R602	76011822	CHIP, 1/20W 8.2K OHM J
R603	76011122	CHIP, 1/20W 1.2K OHM J
R604	76011122	CHIP, 1/20W 1.2K OHM J
R609	76011563	CHIP, 1/20W 56K OHM J
R610	76011223	CHIP, 1/20W 22K OHM J
R611	76011103	CHIP, 1/20W 10K OHM J
R612	76011222	CHIP, 1/20W 2.2K OHM J
R613	76011223	CHIP, 1/20W 22K OHM J
R614	76011103	CHIP, 1/20W 10K OHM J
R615	76011104	CHIP, 1/20W 100K OHM J
R616	76011822	CHIP, 1/20W 8.2K OHM J
R621	76011391	CHIP, 1/20W 390 OHM J
R622	76011391	CHIP, 1/20W 390 OHM J
R626	76011223	CHIP, 1/20W 22K OHM J
R627	76011223	CHIP, 1/20W 22K OHM J
R661	76011102	CHIP, 1/20W 1K OHM J
R662	76011333	CHIP, 1/20W 33K OHM J
R663	76011822	CHIP, 1/20W 8.2K OHM J
R665	76011223	CHIP, 1/20W 22K OHM J
R666	76011473	CHIP, 1/20W 47K OHM J
R667	76011223	CHIP, 1/20W 22K OHM J
R668	76011473	CHIP, 1/20W 47K OHM J
R671	76011102	CHIP, 1/20W 1K OHM J
R672	76011333	CHIP, 1/20W 33K OHM J
R673	76011822	CHIP, 1/20W 8.2K OHM J
R674	76011472	CHIP, 1/20W 4.7K OHM J
R676	76011104	CHIP, 1/20W 100K OHM J
R677	76011104	CHIP, 1/20W 100K OHM J
R681	76011222	CHIP, 1/20W 2.2K OHM J
R682	76011473	CHIP, 1/20W 47K OHM J
R683	76011223	CHIP, 1/20W 22K OHM J
R684	76011223	CHIP, 1/20W 22K OHM J
R687	76011103	CHIP, 1/20W 10K OHM J
R688	76011224	CHIP, 1/20W 220K OHM J
R693	76000445	CHIP JUMPER, 1608TYPE
R697	76553561	OXIDE METAL FILM, 1W 560 OHM J
R698	76011103	CHIP, 1/20W 10K OHM J
R699	76011103	CHIP, 1/20W 10K OHM J
R810	76568479	CERAMIC COVERED, 7W 4.7 OHM J
R811	76120001	CEMENT RES 141C 2.1W 1R8 K
R840	76552562	OXIDE METAL FILM, 1/2W 5.6K OHM J
R841	76366102	CARBON FILM, 1/6W 1K OHM J
R842	76376563	CARB0N FILM, 1/2W 56K OHM J
R843	76376563	CARB0N FILM, 1/2W 56K OHM J
R844	76366103	CARBON FILM, 1/6W 10K OHM J
R845	76366102	CARBON FILM, 1/6W 1K OHM J
R846	76366471	CARBON FILM, 1/6W 470 OHM J
R847	76366473	CARBON FILM, 1/6W 47K OHM J
R848	76366102	CARBON FILM, 1/6W 1K OHM J
R849	76552470	OXIDE METAL FILM, 1/2W 47 OHM J
R850	76366103	CARBON FILM, 1/6W 10K OHM J
R860	76382101	OXIDE METAL FILM, 1W 100 OHM J
R861	76383333	OXIDE METAL FILM, 2W 33K OHM J
R862	76019463	METAL PLATE, 2W 0.22 OHM J
R863	76019461	METAL PLATE, 2W 0.15 OHM J

Location No.	Parts No.	Description
R864	76321828	METAL FILM, 1/2W 0.82 OHM J
R865	76381221	OXIDE METAL FILM, 1/2W 220 OHM J
R866	76366681	CARBON FILM, 1/6W 680 OHM J
R867	76366152	CARBON FILM, 1/6W 1.5K OHM J
R868	76555473	OXIDE METAL FILM, 3W 47K OHM J
R869	76366152	CARBON FILM, 1/6W 1.5K OHM J
R870	76366154	CARBON FILM, 1/6W 150K OHM J
R881	76366222	CARBON FILM, 1/6W 2.2K OHM J
R882	76366471	CARBON FILM, 1/6W 470 OHM J
R885	76366102	CARBON FILM, 1/6W 1K OHM J
R886	76000525	METAL FILM, 1/4W 4.7K OHM F
R887	76367683	CARBON FILM, 1/6W 68K OHM G
R888	76000525	METAL FILM, 1/4W 4.7K OHM F
R889	76383222	OXIDE METAL FILM, 2W 2.2K OHM J
R891	76555331	OXIDE METAL FILM, 3W 330 OHM J
R892	76555331	OXIDE METAL FILM, 3W 330 OHM J
⚠ R899	76005014	METAL FILM, 1W 8.2M OHM J
R8200	76367390	CARBON FILM, 1/6W 390 OHM G
R8210	76000147	METAL FILM, 1/4W 470 OHM F
R8211	76000219	METAL FILM, 1/4W 10 OHM F
R8220	76367390	CARBON FILM, 1/6W 390 OHM G
R8240	76000635	METAL FILM, 1/4W 12K OHM F
R8241	76000529	RESIST0R, METAL FILM, 1/4W 6.8K OHM F
R8242	76367471	CARBON FILM, 1/6W 470 OHM G
R8250	76000145	METAL FILM, 1/4W 330 OHM F
R8251	76000145	METAL FILM, 1/4W 330 OHM F
R8252	76367392	CARBON FILM, 1/6W 3.9K OHM G
R8902	76366333	CARBON FILM, 1/6W 33K OHM J
R8903	76366333	CARBON FILM, 1/6W 33K OHM J
R8904	76366472	CARBON FILM, 1/6W 4.7K OHM J
R8905	76366681	CARBON FILM, 1/6W 680 OHM J
R8908	76366104	CARBON FILM, 1/6W 100K OHM J
R8910	76366472	CARBON FILM, 1/6W 4.7K OHM J
R8911	76366103	CARBON FILM, 1/6W 10K OHM J
R8912	76366223	CARBON FILM, 1/6W 22K OHM J
R8913	76366334	CARBON FILM, 1/6W 330K OHM J
R8914	76366223	CARBON FILM, 1/6W 22K OHM J
R8915	76366102	CARBON FILM, 1/6W 1K OHM J
R8922	76366122	CARBON FILM, 1/6W 1.2K OHM J
R8931	76367123	CARBON FILM, 1/6W 12K OHM G
R8932	76367182	CARBON FILM, 1/6W 1.8K OHM G
R8934	76367472	CARBON FILM, 1/6W 4.7K OHM G
R8941	76367123	CARBON FILM, 1/6W 12K OHM G
R8942	76367182	CARBON FILM, 1/6W 1.8K OHM G
R8944	76367472	CARBON FILM, 1/6W 4.7K OHM G
R8950	76366103	CARBON FILM, 1/6W 10K OHM J
R8951	76366103	CARBON FILM, 1/6W 10K OHM J
RA44	76011105	CHIP, 1/20W 1M OHM J
RA48	76011105	CHIP, 1/20W 1M OHM J
RA51	76011105	CHIP, 1/20W 1M OHM J
RA53	76011105	CHIP, 1/20W 1M OHM J
RA55	76011105	CHIP, 1/20W 1M OHM J
RA57	76011105	CHIP, 1/20W 1M OHM J
RA61	76011222	CHIP, 1/20W 2.2K OHM J
RA62	76011222	CHIP, 1/20W 2.2K OHM J
RA63	76011222	CHIP, 1/20W 2.2K OHM J
RA64	76011222	CHIP, 1/20W 2.2K OHM J
RA65	76011222	CHIP, 1/20W 2.2K OHM J
RA66	76011222	CHIP, 1/20W 2.2K OHM J
RA67	76011222	CHIP, 1/20W 2.2K OHM J
RA68	76011222	CHIP, 1/20W 2.2K OHM J
RA71	76011822	CHIP, 1/20W 8.2K OHM J
RA72	76011153	CHIP, 1/2OW 15K OHM J
RA73	76011273	CHIP, 1/20W 27K OHM J
RA75	76011822	CHIP, 1/20W 8.2K OHM J
RA76	76011153	CHIP, 1/2OW 15K OHM J
RA77	76011114	CHIP, 1/20W 110K OHM J
RA81	76011104	CHIP, 1/20W 100K OHM J
RA82	76011104	CHIP, 1/20W 100K OHM J
RA83	76011104	CHIP, 1/20W 100K OHM J
RA84	76011104	CHIP, 1/20W 100K OHM J
RA85	76011104	CHIP, 1/20W 100K OHM J
RA86	76011104	CHIP, 1/20W 100K OHM J
RA87	76011104	CHIP, 1/20W 100K OHM J

Location No.	Parts No.	Description
RA88	76011104	CHIP, 1/20W 100K OHM J
RA91	76011623	CHIP, 1/20W 62K OHM J
RA94	76000445	CHIP JUMPER, 1608TYPE
RA95	76011623	CHIP, 1/20W 62K OHM J
RA98	76000445	CHIP JUMPER, 1608TYPE
RB15	76366471	CARBON FILM, 1/6W 470 OHM J
RB19	76366470	CARBON FILM, 1/6W 47 OHM J
RB81	76011222	CHIP, 1/20W 2.2K OHM J
RB82	76011471	CHIP, 1/20W 470 OHM J
RB83	76011102	CHIP, 1/20W 1K OHM J
RB84	76011473	CHIP, 1/20W 47K OHM J
RB87	76011394	CHIP, 1/20W 390K OHM J
RB88	76011394	CHIP, 1/20W 390K OHM J
RB89	76011103	CHIP, 1/20W 10K OHM J
RB90	76011302	CHIP, 1/20W 3K OHM J
RB92	76011473	CHIP, 1/20W 47K OHM J
RB93	76011102	CHIP, 1/20W 1K OHM J
RS01	76011562	CHIP, 1/20W 5.6K OHM J
RS02	76011562	CHIP, 1/20W 5.6K OHM J
RS03	76011101	CHIP, 1/20W 100 OHM J
RS04	76011101	CHIP, 1/20W 100 OHM J
RS05	76011562	CHIP, 1/20W 5.6K OHM J
RS06	76011562	CHIP, 1/20W 5.6K OHM J
RS07	76011562	CHIP, 1/20W 5.6K OHM J
RS08	76011562	CHIP, 1/20W 5.6K OHM J
RS09	76011562	CHIP, 1/20W 5.6K OHM J
RS10	76011562	CHIP, 1/20W 5.6K OHM J
RS11	76011562	CHIP, 1/20W 5.6K OHM J
RS12	76011562	CHIP, 1/20W 5.6K OHM J
RS13	76011562	CHIP, 1/20W 5.6K OHM J
RS14	76011562	CHIP, 1/20W 5.6K OHM J
RS15	76011562	CHIP, 1/20W 5.6K OHM J
RS16	76011562	CHIP, 1/20W 5.6K OHM J
RS17 #2	76011562	CHIP, 1/20W 5.6K OHM J
#3	76011562	CHIP, 1/20W 5.6K OHM J
RS18 #2	76011562	CHIP, 1/20W 5.6K OHM J
#3	76011562	CHIP, 1/20W 5.6K OHM J
RS21	76011101	CHIP, 1/20W 100 OHM J
RS22	76011101	CHIP, 1/20W 100 OHM J
RS23	76011101	CHIP, 1/20W 100 OHM J
RS24	76011101	CHIP, 1/20W 100 OHM J
RS27	76011101	CHIP, 1/20W 100 OHM J
RS28	76011101	CHIP, 1/20W 100 OHM J
RS29	76011682	CHIP, 1/20W 6.8K OHM J
RS30	76011182	CHIP, 1/20W 1.8K OHM J
RS31	76011100	CHIP, 1/20W 10 OHM J
RS32	76011222	CHIP, 1/20W 2.2K OHM J
RS33	76011222	CHIP, 1/20W 2.2K OHM J
RS34	76011472	CHIP, 1/20W 4.7K OHM J
RS35	76011102	CHIP, 1/20W 1K OHM J
RS36	76011102	CHIP, 1/20W 1K OHM J
RS37	76011223	CHIP, 1/20W 22K OHM J
RS38	76011223	CHIP, 1/20W 22K OHM J
RV001	76011102	CHIP, 1/20W 1K OHM J
RV01	76011101	CHIP, 1/20W 100 OHM J
RV002	76011101	CHIP, 1/20W 100 OHM J
RV003	76011102	CHIP, 1/20W 1K OHM J
RV03	76011101	CHIP, 1/20W 100 OHM J
RV004	76011101	CHIP, 1/20W 100 OHM J
RV005	76011102	CHIP, 1/20W 1K OHM J
RV006	76011101	CHIP, 1/20W 100 OHM J
RV06	76011101	CHIP, 1/20W 100 OHM J
RV007	76011102	CHIP, 1/20W 1K OHM J
RV07	76011562	CHIP, 1/20W 5.6K OHM J
RV008	76011101	CHIP, 1/20W 100 OHM J
RV08	76011101	CHIP, 1/20W 100 OHM J
RV009	76011101	CHIP, 1/20W 100 OHM J
RV09	76011101	CHIP, 1/20W 100 OHM J
RV10	76011101	CHIP, 1/20W 100 OHM J
RV11	76011101	CHIP, 1/20W 100 OHM J
RV12	76011101	CHIP, 1/20W 100 OHM J
RV14	76011562	CHIP, 1/20W 5.6K OHM J
RV15	76011101	CHIP, 1/20W 100 OHM J
RV17	76011101	CHIP, 1/20W 100 OHM J

Location No.	Parts No.	Description
RV19	76011101	CHIP, 1/20W 100 OHM J
RV20	76366750	CARBON FILM, 1/6W 75 OHM J
RV21	76011562	CHIP, 1/20W 5.6K OHM J @U103
	76366750	CARBON FILM, 1/6W 75 OHM J @UV03
RV22	76011101	CHIP, 1/20W 100 OHM J @U103
	76366750	CARBON FILM, 1/6W 75 OHM J @UV03
RV23	76011222	CHIP, 1/20W 2.2K OHM J @U103
	76366101	CARBON FILM, 1/6W 100 OHM J @UV03
RV24	76011222	CHIP, 1/20W 2.2K OHM J
RV32	76011104	CHIP, 1/20W 100K OHM J
RV33	76011104	CHIP, 1/20W 100K OHM J
RV34	76011104	CHIP, 1/20W 100K OHM J
RV35	76011750	CHIP, 1/20W 75 OHM J
RV36	76011750	CHIP, 1/20W 75 OHM J
RV37	76011101	CHIP, 1/20W 100 OHM J
RV38	76011562	CHIP, 1/20W 5.6K OHM J
RV40	76011750	CHIP, 1/20W 75 OHM J
RV41	76011750	CHIP, 1/20W 75 OHM J
RV42	76011750	CHIP, 1/20W 75 OHM J
RV43	76011750	CHIP, 1/20W 75 OHM J
RV61	76011101	CHIP, 1/20W 100 OHM J
RV85	76366471	CARBON FILM, 1/6W 470 OHM J
RV86	76366471	CARBON FILM, 1/6W 470 OHM J
RV89	76011680	CHIP, 1/20W 68 OHM J
RV147	76011101	CHIP, 1/20W 100 OHM J
RV148	76011101	CHIP, 1/20W 100 OHM J
RV323	76011101	CHIP, 1/20W 100 OHM J
RV324	76011101	CHIP, 1/20W 100 OHM J
RV325	76011101	CHIP, 1/20W 100 OHM J
RV330	76011101	CHIP, 1/20W 100 OHM J
RV331	76011101	CHIP, 1/20W 100 OHM J
RV332	76011101	CHIP, 1/20W 100 OHM J
RV333	76011181	CHIP, 1/20W 180 OHM J
RV334	76011103	CHIP, 1/20W 10K OHM J
RV335	76011123	CHIP, 1/20W 12K OHM J
RV346	76011101	CHIP, 1/20W 100 OHM J
RY101	76011101	CHIP, 1/20W 100 OHM J
RY102	76011221	CHIP, 1/20W 220 OHM J
RY103	76011102	CHIP, 1/20W 1K OHM J
RY104	76011102	CHIP, 1/20W 1K OHM J
RY105	76011821	CHIP, 1/20W 820 OHM J
RY106	76000445	CHIP JUMPER, 1608TYPE
RY107	76011222	CHIP, 1/20W 2.2K OHM J
RY109	76011332	CHIP, 1/20W 3.3K OHM J
RY110	76011152	CHIP, 1/20W 1.5K OHM J
RY160	76011471	CHIP, 1/20W 470 OHM J
RY161	76011101	CHIP, 1/20W 100 OHM J
RY501	76011303	CHIP, 1/20W 30K OHM J
RY502	76011103	CHIP, 1/20W 10K OHM J
RY504	76011103	CHIP, 1/20W 10K OHM J
RY505	76011123	CHIP, 1/20W 12K OHM J
RY507	76011102	CHIP, 1/20W 1K OHM J
RY508	76011222	CHIP, 1/20W 2.2K OHM J
RY509	76011472	CHIP, 1/20W 4.7K OHM J
RY510	76011152	CHIP, 1/20W 1.5K OHM J
RY511	76011222	CHIP, 1/20W 2.2K OHM J
RY512	76011222	CHIP, 1/20W 2.2K OHM J
RY513	76011152	CHIP, 1/20W 1.5K OHM J
RY516	76011472	CHIP, 1/20W 4.7K OHM J
RY517	76011472	CHIP, 1/20W 4.7K OHM J
RY518	76011472	CHIP, 1/20W 4.7K OHM J
RY519	76000445	CHIP JUMPER, 1608TYPE
RY520	76011101	CHIP, 1/20W 100 OHM J
RY521	76011101	CHIP, 1/20W 100 OHM J
RY523	76011102	CHIP, 1/20W 1K OHM J
RY524	76011102	CHIP, 1/20W 1K OHM J
RY525	76011222	CHIP, 1/20W 2.2K OHM J
RY526	76011222	CHIP, 1/20W 2.2K OHM J
RY527	76011222	CHIP, 1/20W 2.2K OHM J
RY528	76011222	CHIP, 1/20W 2.2K OHM J
RY529	76011102	CHIP, 1/20W 1K OHM J
RY530	76011102	CHIP, 1/20W 1K OHM J
RY531	76011102	CHIP, 1/20W 1K OHM J
RY532	76011101	CHIP, 1/20W 100 OHM J

Location No.	Parts No.	Description
RY533	76011102	CHIP, 1/20W 1K OHM J
RY534	76011102	CHIP, 1/20W 1K OHM J
RY535	76011330	CHIP, 1/20W 33 OHM J
RY536	76011330	CHIP, 1/20W 33 OHM J
RY541	76011392	CHIP, 1/20W 3.9K OHM J
RY542	76011392	CHIP, 1/20W 3.9K OHM J
RY543	76011152	CHIP, 1/20W 1.5K OHM J
RY545	76011101	CHIP, 1/20W 100 OHM J
RY548	76011102	CHIP, 1/20W 1K OHM J
RY550	76011182	CHIP, 1/20W 1.8K OHM J
RY551	76011182	CHIP, 1/20W 1.8K OHM J
RY552	76011152	CHIP, 1/20W 1.5K OHM J
RY560	76011332	CHIP, 1/20W 3.3K OHM J
RY561	76011471	CHIP, 1/20W 470 OHM J
RY573	76011102	CHIP, 1/20W 1K OHM J
RY575	76011103	CHIP, 1/20W 10K OHM J
RY576	76011123	CHIP, 1/20W 12K OHM J
RY578	76011332	CHIP, 1/20W 3.3K OHM J
RY579	76011102	CHIP, 1/20W 1K OHM J
RY580	76011101	CHIP, 1/20W 100 OHM J
RY582	76011332	CHIP, 1/20W 3.3K OHM J
RY583	76011102	CHIP, 1/20W 1K OHM J
RY584	76011101	CHIP, 1/20W 100 OHM J
RY585	76011103	CHIP, 1/20W 10K OHM J
RY586	76011330	CHIP, 1/20W 33 OHM J
RY587	76011330	CHIP, 1/20W 33 OHM J
RY588	76011330	CHIP, 1/20W 33 OHM J
RY589	76000445	CHIP JUMPER, 1608TYPE
RY590	76011103	CHIP, 1/20W 10K OHM J
RY591	76011101	CHIP, 1/20W 100 OHM J
RY592	76011101	CHIP, 1/20W 100 OHM J
RY593	76011330	CHIP, 1/20W 33 OHM J
RY594	76011330	CHIP, 1/20W 33 OHM J
RY595	76011330	CHIP, 1/20W 33 OHM J
RY596	76000445	CHIP JUMPER, 1608TYPE
G101	76011151	CHIP, 1/20W 150 OHM J
G102	76011151	CHIP, 1/20W 150 OHM J
GA89	76000445	CHIP JUMPER, 1608TYPE
GA90	76000445	CHIP JUMPER, 1608TYPE
GJ105	76000445	CHIP JUMPER, 1608TYPE
GR103	76000445	CHIP JUMPER, 1608TYPE
JR003	76000445	CHIP JUMPER, 1608TYPE
JR004	76000445	CHIP JUMPER, 1608TYPE
JR005	76000445	CHIP JUMPER, 1608TYPE
JR006	76000445	CHIP JUMPER, 1608TYPE
JR007	76000445	CHIP JUMPER, 1608TYPE
JR008	76000445	CHIP JUMPER, 1608TYPE
JR009	76000445	CHIP JUMPER, 1608TYPE
JR010	76000445	CHIP JUMPER, 1608TYPE
JR011	76000445	CHIP JUMPER, 1608TYPE
JR012	76000445	CHIP JUMPER, 1608TYPE
JR013	76000445	CHIP JUMPER, 1608TYPE
JR014	76000445	CHIP JUMPER, 1608TYPE
JR015	76000445	CHIP JUMPER, 1608TYPE
JR016	76000445	CHIP JUMPER, 1608TYPE
JR017	76000445	CHIP JUMPER, 1608TYPE
JR018	76000445	CHIP JUMPER, 1608TYPE
JR019	76000445	CHIP JUMPER, 1608TYPE
COILS & TRANSFORMERS		
L101	23289027	COIL, PEAKING, TRF4680AT
L103	23289026	COIL, PEAKING, TRF4470AT
L840	23289981	COIL, PEAKING, TRF4330AZ
L841	23103304	FERRITE CHOKE, TEM2011AA
L861	23103304	FERRITE CHOKE, TEM2011AA
L862	23103307	FERRITE CHOKE, TEM2014AA
L881	23103304	FERRITE CHOKE, TEM2011AA
L882	23103304	FERRITE CHOKE, TEM2011AA
L883	23103304	FERRITE CHOKE, TEM2011AA
L884	23103304	FERRITE CHOKE, TEM2011AA
L885	23103304	FERRITE CHOKE, TEM2011AA
L886	23103304	FERRITE CHOKE, TEM2011AA
L888	23248446	COIL, CHOKE, TLN3462AH
L890	23248432	COIL, CHOKE, TLN3499AH

Location No.	Parts No.	Description
L891	23248432	COIL, CHOKE, TLN3499AH
L892	23248432	COIL, CHOKE, TLN3499AH
L893	23248417	COIL, CHOKE, TLN3481AH
L895	23248432	COIL, CHOKE, TLN3499AH
L896	23289981	COIL, PEAKING, TRF4330AZ
L8210	23289981	COIL, PEAKING, TRF4330AZ
L8211	23248456	COIL, CHOKE, TLN3540AH
L8213	23248417	COIL, CHOKE, TLN3481AH
L8930	23248432	COIL, CHOKE, TLN3499AH
L8931	23248432	COIL, CHOKE, TLN3499AH
L8940	23248432	COIL, CHOKE, TLN3499AH
L8941	23248432	COIL, CHOKE, TLN3499AH
LV13	23246662	COIL, CHIP, TRF4100CN
LV20	23221156	COIL, PEAKING, TRF4560AJ
LY012	23246662	COIL, CHIP, TRF4100CN
LY100	23246656	COIL, CHIP, TRF4330CG
LY101	23248398	COIL, CHOKE, TLN3278D @U101
	23103827	INDUCTOR, BEAD, TEM2120M @U103
LY102	23221144	COIL, PEAKING, TRF4229AJ @U101
	23103827	INDUCTOR, BEAD, TEM2120M @U103
LY103	23221144	COIL, PEAKING, TRF4229AJ @U101
	23103230	INDUCTOR, BEAD, TEM2134AD @U103
LY104	23246653	COIL, CHIP, TRF4150CG
LY105	23246655	COIL, CHIP, TRF4270CG
LY112	23103230	INDUCTOR, BEAD, TEM2134AD
LY501	23246662	COIL, CHIP, TRF4100CN
LY503	23246662	COIL, CHIP, TRF4100CN
⚠ T801	23211827	COIL, LINE FILTER, TRF3239AH
⚠ T802	23211836	COIL, LINE FILTER, TRF3197AH
⚠ T840	23217790	TRANSFORMER, CONVERTER, TPW3425BH
⚠ T862	23217682	TRANSFORMER, CONVERTER, TPW3553AS
M802A	23103839	FERRITE CORE, TFE1012
M811A	23103778	FERRITE CORE, TFE1008
M905A	23103778	FERRITE CORE, TFE1008
MB91A	23103840	FERRITE CORE, TFE1013
ZB22B	23103840	FERRITE CORE, TFE1013
SEMICONDUCTORS		
Q151	23205346	TRANSISTOR, KTA2014Y/P
Q152	23205347	TRANSISTOR, KTC4075Y/P
Q172	23205347	TRANSISTOR, KTC4075Y/P
Q601	23009603	IC, AN7580
Q612	23205346	TRANSISTOR, KTA2014Y/P
Q613	23205347	TRANSISTOR, KTC4075Y/P
Q614	23205426	TRANSISTOR, KRC106S/P
Q661	23205424	TRANSISTOR, KTC2875B/P
Q662	23205424	TRANSISTOR, KTC2875B/P
Q663	23085575	IC, OP AMP, BA4558
Q664	23205428	TRANSISTOR, KRA104S/P
Q681	23205424	TRANSISTOR, KTC2875B/P
Q682	23205424	TRANSISTOR, KTC2875B/P
Q801	23135069	IC, STRF6268S
Q840	23085559	IC, MIP280
⚠ Q841	23000823	IC, PHOTO COUPLER, TLP421F(GR)
⚠ Q842	23000823	IC, PHOTO COUPLER, TLP421F(GR)
Q845	23205499	TRANSISTOR, KTC3198 Y/P
Q846	23205499	TRANSISTOR, KTC3198 Y/P
Q847	23205499	TRANSISTOR, KTC3198 Y/P
⚠ Q862	23000823	IC, PHOTO COUPLER, TLP421F(GR)
Q881	23085389	IC, NJM431L
Q8200	23085050	IC, SI-3120J(LF1101)
Q8210	23085397	IC, SI-8033SS
Q8220	23135077	IC, SI-3090CA
Q8240	23085821	IC, ADJ REG. VO=1.5V-16.0V BA7810T-V5
Q8250	23085377	IC, PQ5EV3J0000H
Q8251	23085600	IC, PST9129
Q8901	23205499	TRANSISTOR, KTC3198 Y/P
Q8902	23205499	TRANSISTOR, KTC3198 Y/P
Q8904	23205497	TRANSISTOR, KTA1266 Y/P
Q8911	23205499	TRANSISTOR, KTC3198 Y/P
Q8912	23205499	TRANSISTOR, KTC3198 Y/P
Q8930	23009998	IC, BA00JC5WT-V5
Q8940	23009998	IC, BA00JC5WT-V5
Q8950	23085503	IC, OPE AMP, TA75358P

Location No.	Parts No.	Description
QA81	23205329	TRANSISTOR, RN1404(F)
QA82	23205329	TRANSISTOR, RN1404(F)
QA83	23205329	TRANSISTOR, RN1404(F)
QA84	23205329	TRANSISTOR, RN1404(F)
QA85	23205329	TRANSISTOR, RN1404(F)
QA86	23205329	TRANSISTOR, RN1404(F)
QA87	23205329	TRANSISTOR, RN1404(F)
QA88	23205329	TRANSISTOR, RN1404(F)
QA91	23085674	IC, QT240-ISS-G-CA
QA92	23085674	IC, QT240-ISS-G-CA
QA93	23085731	IC, +4.2V 2% REG. SOT-23-5 R1121N421B-TR-FA
QA94	23085067	IC, R1121N331B-TR-FA
QB81	23205446	TRANSISTOR, 2SC2412K, Q T146
QB83	23085867	IC, DUAL COMPARATOR BA10393F-E2
QB84	23205446	TRANSISTOR, 2SC2412K, Q T146
QS01	23009916	IC, MM1631AJBE
QS02	23205506	TRANSISTOR, 2SC4081 Q
QS03	23205506	TRANSISTOR, 2SC4081 Q
QS04	23205506	TRANSISTOR, 2SC4081 Q
QS05	23205428	TRANSISTOR, KRA104S/P
QS06	23205424	TRANSISTOR, KTC2875B/P
QS07	23205424	TRANSISTOR, KTC2875B/P
QV01	23009940	IC, MM1630AQ
QV004	23205506	TRANSISTOR, 2SC4081 Q
QV005	23205506	TRANSISTOR, 2SC4081 Q
QV006	23205506	TRANSISTOR, 2SC4081 Q
QV007	23205506	TRANSISTOR, 2SC4081 Q
QV008	23205506	TRANSISTOR, 2SC4081 Q
QV009	23205305	TRANSISTOR, 2SC4667-O(F)
QV48	23205499	TRANSISTOR, KTC3198 Y/P
QV91	23205507	TRANSISTOR, 2SA1576A Q
QY100	23085570	IC, TC90A45F
QY101	23205506	TRANSISTOR, 2SC4081 Q
QY102	23205506	TRANSISTOR, 2SC4081 Q
QY103	23205507	TRANSISTOR, 2SA1576A Q
QY160	23205347	TRANSISTOR, KTC4075Y/P
QY501	23009929	IC, TA1383FG(DRY,EL)
QY502	23205305	TRANSISTOR, 2SC4667-O(F)
QY503	23205507	TRANSISTOR, 2SA1576A Q
QY504	23205507	TRANSISTOR, 2SA1576A Q
QY506	23205506	TRANSISTOR, 2SC4081 Q
QY507	23205506	TRANSISTOR, 2SC4081 Q
QY508	23205506	TRANSISTOR, 2SC4081 Q
QY509	23205506	TRANSISTOR, 2SC4081 Q
QY511	23205507	TRANSISTOR, 2SA1576A Q
QY512	23205507	TRANSISTOR, 2SA1576A Q
QY513	23205507	TRANSISTOR, 2SA1576A Q
QY514	23205507	TRANSISTOR, 2SA1576A Q
QY515	23205507	TRANSISTOR, 2SA1576A Q
QY516	23205507	TRANSISTOR, 2SA1576A Q
QY518	23205506	TRANSISTOR, 2SC4081 Q
QY522	23205506	TRANSISTOR, 2SC4081 Q
D601	23357703	DIODE, 1SS355
D602	23357703	DIODE, 1SS355
D603	23357703	DIODE, 1SS355
D604	23357703	DIODE, 1SS355
D605	23357703	DIODE, 1SS355
D606	23357703	DIODE, 1SS355
D607	23357703	DIODE, 1SS355
D608	23357703	DIODE, 1SS355
D609	23357703	DIODE, 1SS355
D611	23357703	DIODE, 1SS355
D612	23357703	DIODE, 1SS355
D613	23357703	DIODE, 1SS355
D614	23357703	DIODE, 1SS355
D615	23357703	DIODE, 1SS355
D616	23357703	DIODE, 1SS355
D617	23357703	DIODE, 1SS355
D628	23357771	DIODE, ZENER, MA8120-M
D801	23357712	DIODE, D5SB60, 4009 F05
D840	23362046	DIODE, LN1WBA60 4101
D841	23357838	DIODE, ZENER, MTZJ5.6C
D842	23357830	DIODE, ZENER, MTZJ4.7A
D843	23357366	DIODE, FR105-B5

Location No.	Parts No.	Description
D844	23357838	DIODE, ZENER, MTZJ5.6C
D845	23357697	DIODE, 1SS133
D846	23357684	DIODE, ZENER, RD3.0ESA B2
D847	23357684	DIODE, ZENER, RD3.0ESA B2
D848	23357697	DIODE, 1SS133
D849	23357697	DIODE, 1SS133
D850	23357622	DIODE, ZENER, RD11ESA B3
D861	23357837	DIODE, ZENER, MTZJ5.6B
D863	23357697	DIODE, 1SS133
D864	23357366	DIODE, FR105-B5
D865	23357697	DIODE, 1SS133
D866	23357709	DIODE, RU1P
D867	23357900	DIODE, ZENER, MTZJ33B
D883	23357702	DIODE, FML-G12S
D884	23357366	DIODE, FR105-B5
D885	23357860	DIODE, RL2Z
D886	23357408	DIODE, FMX-12S(023-108)
D887	23357911	DIODE, FMB-26L
D888	23362113	DIODE, FML-G22S
D894	23357841	DIODE, ZENER, MTZJ6.8A
D895	23357841	DIODE, ZENER, MTZJ6.8A
D896	23357841	DIODE, ZENER, MTZJ6.8A
D897	23357841	DIODE, ZENER, MTZJ6.8A
D898	23357841	DIODE, ZENER, MTZJ6.8A
⚠ D899	76019485	VARISTOR, TNR10V431K
D8200	23357697	DIODE, 1SS133
D8210	23357519	DIODE, RK44,
D8211	23357831	DIODE, ZENER, MTZJ4.7B
D8902	23357697	DIODE, 1SS133
D8903	23357697	DIODE, 1SS133
D8904	23357838	DIODE, ZENER, MTZJ5.6C
D8905	23357838	DIODE, ZENER, MTZJ5.6C
D8911	23357838	DIODE, ZENER, MTZJ5.6C
D8912	23357838	DIODE, ZENER, MTZJ5.6C
D8913	23357838	DIODE, ZENER, MTZJ5.6C
D8914	23357697	DIODE, 1SS133
D8915	23357697	DIODE, 1SS133
D8922	23357639	DIODE, ZENER, RD5.6ESA B1
D8930	23357697	DIODE, 1SS133
D8931	23357697	DIODE, 1SS133
D8940	23357697	DIODE, 1SS133
D8941	23357697	DIODE, 1SS133
D8950	23357637	DIODE, ZENER, RD5.6ESA B3
D8951	23357637	DIODE, ZENER, RD5.6ESA B3
DA91	23357406	DIODE, ZENER, UDZS5.6B
DA92	23357406	DIODE, ZENER, UDZS5.6B
DB03	23358615	DIODE, LED INFRARED, SIR-56SB3F
DB81	23358584	DIODE, LED, SML-811UTT86
DB82	23358585	LED, LAMP, SML-810MTT86
DV07	23357751	DIODE, ZENER, MA8068-M
DV14	23357751	DIODE, ZENER, MA8068-M
MISCELLANEOUS		
A305	23717197	SCREW, THUMB SCREW
A306	23717198	SCREW, THUMB SCREW RETAINER
A516	23717192	SCREW, SCREW, AV BOARD
B112	23059129	PIECE COVER
B209	23738088	SCREW, BTBW3X12ECO
B214	23965241	TAPE, CC #12 10MM L30M
B215	23965241	TAPE, CC #12 10MM L30M
B231	23738088	SCREW, BTBW3X12ECO
B235	23845856	CLAMP, WIRE, POF COAT) L=70MM
BB10	23713014	PLUG, B-B 16P 1.5
BB11	23713013	SOCKET, B-B 16P 1.5
BB20	23713014	PLUG, B-B 16P 1.5
BB21	23713013	SOCKET, B-B 16P 1.5
BB70	23713810	PLUG , TAC-A46P-B1
BB71	23903245	SOCKET, B-B 46P, TAC-A46X-B1
⚠ F801	23144319	FUSE, CARTRIDGE, 125V 8A, 5.2X20
F801A	23165433	FUSE HOLDER, 5.2
⚠ F840	23144704	FUSE, AXIAL 125V 200MA
⚠ F860	23144714	FUSE, AXIAL 125V 4.0A
⚠ F880	23144714	FUSE, AXIAL 125V 4.0A
⚠ F881	23144706	FUSE, AXIAL 125V 500MA

Location No.	Parts No.	Description
⚠ F882	23144714	FUSE, AXIAL 125V 4.0A
⚠ F883	23144715	FUSE, AXIAL 125V 5.0A
⚠ F884	23144715	FUSE, AXIAL 125V 5.0A
⚠ F899	23144326	FUSE, CARTRIDGE, 250V 2A, 5.2X20
F899A	23165433	FUSE HOLDER, 5.2
⚠ F8210	23144709	FUSE, AXIAL 125V 1.5A
H002 #1	23148378	IF MODULE, US BUFFER 6M TRAP, MVUS51A
#2	23148379	IF MODULE, US VSD BUFFER 6MTRAP, MVUS52A
#3	23148379	IF MODULE, US VSD BUFFER 6MTRAP, MVUS52A
H003	23124099	ANTENNA SWITCH, RSU135X1, 2I3O BUNPAI US
H003A	23747055	NUT, F-CONNECTOR 2H BS
J601A	23171400	WIRE, PVC, SOLDER-PLATED 300V 7/16 BRN UL CSA
JR001	23103239	INDUCTOR, BEAD, TEM2143AD
JR002	23103239	INDUCTOR, BEAD, TEM2143AD
MA01	23389271	CABLE, FFC P1.25-15-98
MV01	23368931	CABLE, MDR 26P 300MM 3M 79162-26M-030-011F
MV04	23389270	CABLE, FFC P1.25-26-140
MX18	23389272	CABLE, FFC P1.25-11-365
MX19	23389273	CABLE, FFC P1.25-17-410
P105	23713755	PLUG, 4P 2.5MM G, B4B-EH-F1-TV4
P800	23713702	PLUG, 2P 11.88MM W VT
P800A	23103840	FERRITE CORE, TFE1013
⚠ P801	23372117	POWER CORD, U/C 125V10A HSV 5 CMC-02P 5
P805	23164965	CONNECTOR, PLUG 4P, W-P3504-#02
P811A	23713713	PLUG, 2P 3.96MM VH
P891	23713759	PLUG, 8P 2.5MM G, B8B-EH-F1-TV4
P892	23713764	PLUG, 13P
P901	23713754	PLUG, 3P 2.5MM G, B3B-EH-F1-TV4
P902A	23164563	CONNECTOR, PLUG 3P
P903	23713755	PLUG, 4P 2.5MM G, B4B-EH-F1-TV4
P906	23713761	PLUG, NP 2.5MM G, B10B-EH-F1A
P907	23713763	PLUG, NP 2.5MM G, B12B-EH-F1A
PA01	23713240	CONNECTOR, 15FE-BT-VK-N JST
PB22	23713755	PLUG, 4P 2.5MM G, B4B-EH-F1-TV4
PJ60	23713756	PLUG, 5P 2.5MM G, B5B-EH-F1-TV4
PJ61	23713762	PLUG, NP 2.5MM G, B11B-EH-F1A
PJ63	23713756	PLUG, 5P 2.5MM G, B5B-EH-F1-TV4
PJ64	23713757	PLUG, 6P 2.5MM G, B6B-EH-F1-TV4
PV01	23023311	JACK, PIN 2S6P, LAP5030-0111GC
PV02	23023205	JACK, PIN 10P SMK KARI2 @U103
	23023184	JACK, 1S3P, LAP5100-1502F @UV03
PV03 #1	23023211	JACK, PIN 7P SMK KARI04
#2	23023210	JACK, PIN 9P SMK LAP5030-0402F
#3	23023210	JACK, PIN 9P SMK LAP5030-0402F
PV04	23713282	CONNECTOR, 26FE-ST-VK-N
PV13	23713760	PLUG, NP 2.5MM G, B9B-EH-F1A
PV14	23713781	PLUG, 8P 2.5MM W, S8B-EH
PX18	23713270	CONNECTOR, 11FE-ST-VK-N
PX19	23713110	CONNECTOR, FE-ST-VK-N 17P JST
Q825B	23738088	SCREW, BTBW3X12ECO
Q893B	23717241	SCREW, BITTB3X8ECO
Q894B	23717241	SCREW, BITTB3X8ECO
⚠ S810	23344522	SWITCH, SPVF11
⚠ SR81	23146588	RELAY, DLS5D1-O(M) 0.15W
⚠ SR82	23146584	RELAY, DC12V, TV5, DG-3
W661	23351244	SPEAKER, SPBOX(L) 8-OHM 20W SPK-1455AM
W662	23351245	SPEAKER, SPBOX(R) 8-OHM 20W SPK-1456AM
XY501	23153607	CRYSTAL, 3.58MHZ
XY502	23153721	CERAMIC RESONATOR, 503KHZ
PC BOARD ASSEMBLIES		
✻ U101 #1	23764145	PC BOARD ASSY, IF AUDIO ACIN PU PD1775D
✻ #2	23764163	PC BOARD ASSY, IF AUD ACIN PU PD1775E
✻ #3	23764163	PC BOARD ASSY, IF AUD ACIN PU PD1775E
✻ U103 #1	23764144	PC BOARD ASSY, BACK AV PU PD1774C
✻ #2	23764162	PC BOARD ASSY, BACK AV PU PD1774D
✻ #3	23764162	PC BOARD ASSY, BACK AV PU PD1774D
✻ U802	23764201	PC BOARD ASSY, MAIN POWER PU PD2128A-1
✻ UA02	23764202	PC BOARD ASSY, REMORT SENS PU PD2128A-3
✻ UA03	23764203	PC BOARD ASSY, DOOR SW PU PD2128A-4
✻ UA06	23764199	PC BOARD ASSY, FRONT KEY PD2072H
✻ UD02 #1	23148440	PC BOARD SCALER B910PD2208C1
✻ #2	23148441	PC BOARD SCALER B910PD2208D1
✻ #3	23148442	PC BOARD SCALER B910PD2208E1

Location No.		Parts No.	Description
✻ UV02	#1	23148418	SCAN CONVERTER MODULE, 03DVI, MHDM01A
✻	#2	23148376	SCAN CONVERTER MODULE, 03DVI-2, MHDM02
✻	#3	23148376	SCAN CONVERTER MODULE, 03DVI-2, MHDM02
✻ UV03		23764204	PC BOARD ASSY, FRONT AV PU PD2128A-2
TUNER			
⚠ H001		23321482	TUNER, US181CH IIC PH 5V PANA ELA52LX5
⚠ HY01		23321480	TUNER, TIF US IIC PH 181CH 5V ENG36A18GF
ACCESSORIES			
A701	#1	23015122	CARTON, CARTON
	#2	23067700	CARTON, CARTON
	#3	23067701	CARTON, CARTON
A703	#1	23946773	PACKING, TOP PACKING
	#2	23946771	PACKING, TOP PACKING
	#3	23946772	PACKING, TOP PACKING
A708	#1	23946768	PACKING, BOTTOM PACKING
	#2	23946768	PACKING, BOTTOM PACKING
	#3	23946769	PACKING, BOTTOM PACKING
A709	#1	23067696	CARTON, BASE TRAY
	#2	23067694	CARTON, BASE TRAY
	#3	23067695	CARTON, BASE TRAY
A710	#1	23946776	PACKING, SUPPORT POST
	#2	23946774	PACKING, SUPPORT POST
	#3	23946775	PACKING, SUPPORT POST
⚠ K912		23306599	REMOCON HAND UNIT, CT-90164
KB01		23000852	REMOCON RECEIVER, PIC-37043TE2
Y101	#1	23566686	OWNERS MANUAL, ENGLISH/FRENCH
⚠ Y101E	#2	23566642	OWNERS MANUAL, ENGLISH/FRENCH
⚠	#3	23566642	OWNERS MANUAL, ENGLISH/FRENCH
Y102		23589650	SHEET, IMPORTANT NOTES
CABINET PARTS			
⚠ A025		23532769	COVER, LAMP TUNNEL PURCHASE ASY
⚠ A026		23533363	COVER, DOOR LAMP PURCHASE
⚠ A101		23533280	COVER, BASE PURCHASE ASSEY
A184		23469392	INSULATOR, 05_LENS_GASKET
⚠ A201	#1	23533580	COVER, BEZEL PURCHASE ASSY
⚠	#2	23533335	COVER, BEZEL PURCHASE ASM
⚠	#3	23533339	COVER, BEZEL PURCHASE ASM
⚠ A205	#1	23533605	COVER, BACKCOVER PURCHASE ASSY
⚠	#2	23533337	COVER, BACK COVER PURCHASE
⚠	#3	23533341	COVER, BACK COVER PURCHASE
A215		23940083	PIECE, PIECE ENCLOSURE,DLE
A220		23451976	PUSH CATCH, CLICK
⚠ A222	#1	23533521	COVER, PEDESTAL ASSY
⚠	#2	23533521	COVER, PEDESTAL ASSY
⚠	#3	23533523	COVER, PEDESTAL ASSY
A224	#1	23433357	DECORATIVE, DECO TRIM ALUM
	#2	23433357	DECORATIVE, DECO TRIM ALUM
	#3	23433358	DECORATIVE, DECO TRIM ALUM
A225		23940084	PIECE, STRIKER
A227	#1	23433344	DECORATIVE, CTRL PANEL TRIM
	#2	23433344	DECORATIVE, CTRL PANEL TRIM
	#3	23433346	DECORATIVE, CTRL PANEL TRIM
A231	#3	23940466	PIECE, PIECE SIDE RIGHT
A232	#3	23940467	PIECE, PIECE SIDE LEFT
⚠ A271	#1	23405473	OPTICAL ENGINE, LV-672 TB 0A
⚠	#2	23405474	OPTICAL ENGINE, LV-672 TB 0B
⚠	#3	23405476	OPTICAL ENGINE, LV-672 TB 0D
A278		23084267	BRACKET, SPEED CLIP
A329	#1	23433356	DECORATIVE, DECO FRAME, BEZEL
	#2	23433355	DECORATIVE, DECO FRAME, BEZEL
	#3	23433359	DECORATIVE, SCREEN DECO FRAME
A333		23450863	PANEL, A/V MOUNT PURCHASE
⚠ A401		23533334	COVER, REAR COVER PURCHASE
A421		23533367	COVER, REAR COVER, DLE
A422		23084862	BRACKET, REAR VENT
E998Z		23311153	EXCHANGE LAMP, PJ-D95-LMP
K501	#1	23311135	SCREEN, 46K5M LENTICULAR SHEET
	#2	23311133	SCREEN, 52K5M LENTICULAR SHEET
	#3	23311137	SCREEN, 62K5M LENTICULAR SHEET
K502	#1	23311075	SCREEN, 46K4M FRESNEL SHEET
	#2	23311072	SCREEN, 52K4M FRESNEL SHEET

Location No.		Parts No.	Description
	#3	23311081	SCREEN, 62K4MF FRESNEL SHEET
K601	#1	23405454	MIRROR, 46G4M3
	#2	23405453	MIRROR, 52G4M3
	#3	23405455	MIRROR, 62G4M3
SK01		23587525	SERVICE KIT, LAMP FAN
SK02		23587526	SERVICE KIT, DMD FAN
SK03		23587527	SERVICE KIT, BALLAST FAN
SK04		23587528	SERVICE KIT, THERMOSTAT
SK06		23587536	SERVICE KIT, B TO F CABLE
SK08		23587538	SERVICE KIT, S TO F CABLE
SK09		23587539	SERVICE KIT, FAN TRANSFER CABLE

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN

TOSHIBA

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(REVISED.1)

SERVICE MANUAL

Projection Television

52HM85
62HM85

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APPENDIX:

CIRCUIT DIAGRAM

SAFETY INSTRUCTIONS

SAFETY PRECAUTION

WARNING: Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. When replacing a chassis in the cabinet, always be certain that all the prospective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety character istics as specified in the parts list may create shock, fire, or other hazards.

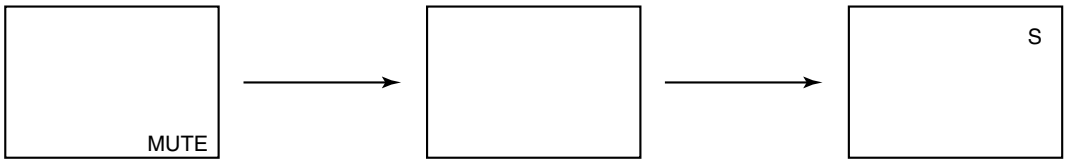
SERVICE MODE

1. ENTERING SERVICE MODE

1) Press MUTE button twice on Remote Control.

2) Press MUTE button again and keep pressing.

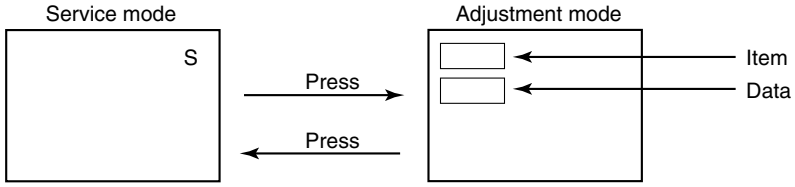
3) While pressing the MUTE button, press MENU button on TV set.



(Service mode display)

2. DISPLAYING THE ADJUSTMENT MENU

1) Press MENU button on TV.



3. SELECTING THE ADJUSTING ITEMS

1) Every pressing of CHANNEL ▲ button in the service mode changes the adjustment items in the order of table-2. (▼ button for reverse order)

Refer to table-1 for preset data of adjustment mode.
(See SETTING & ADJUSTING DATA on page 7)

4. ADJUSTING THE DATA

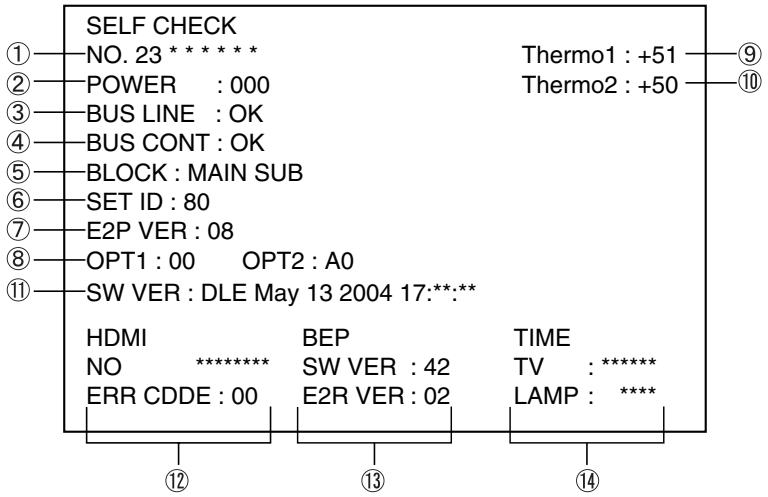
1) Pressing of VOLUME ▲ or ▼ button will change the value of data in the range from 00H to FFH. The variable range depends on the adjusting item.

5. EXIT FROM SERVICE MODE

1) Pressing POWER button to turn off the TV once.

6. SELF DIAGNOSTIC FUNCTION

1) Press “9” button on Remote Control during display of adjustment menu in the service mode.
   The diagnosis will begin to check if interface among IC’s is executed properly.
2) During diagnosis, the following displays are shown.



① Part number of microprocessor (IC601)
② Operation number of protection circuit (The number of times of the power supply OFF by fan stop) . . . . “000” is normal.
③ BUS line check
- “OK” ..... Normal
- “SCL-GND” or “NG” ..... SCL-GND short circuit
- “SDA-GND” or “NG” ..... SDA-GND short circuit
- “SCL-SDA” or “NG” ..... SCL-SDA short circuit

④ BUS line ACK (acknowledge) check
- “OK” ..... Normal

⑤ Sync. signal check
- Green display ..... Normal
- Red display ..... NG

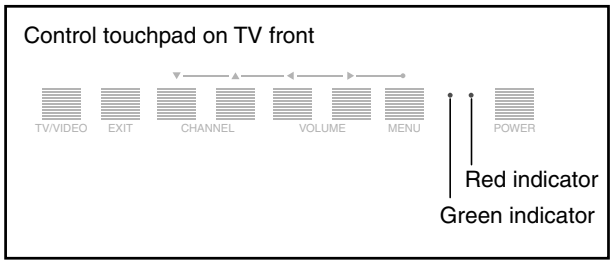
  MAIN ..... Main sync
  SUB ..... Sub sync (when turn on the PIP)

⑥ ID code for TV Set
⑦ Version of "EEP"
⑧ Data for "OPT"
⑨ Temperature of DMD
⑩ Temperature of the color wheel neighborhood
⑪ Software version history
⑫ HDMI Software
   NO ***** .....Serial No.
   ERR CODE .....Error Code
⑬ BEP Software Version
   SW VER : **.....Version
   E2P VER : ** EEP ROM Version
⑭ Use time
   TV .....TV set on time (hour)
   LAMP.....LAMP set on time (hour)
   (It may shift from TV set on time.)

7. LED indications

The green and red LED lights on the TV control touchpad (on the lower right corner of the TV screen) indicate the TV's current status, as follows:

- Green ON Solid (not blinking) = Control touchpad being pressed.
- Red ON Solid (not blinking) = Power ON.
- Green and/or Red blinking (see table below for condition and solution).



	LED Indication	Condition	Solution
1	Red and Green turn off.	Power supply OFF. (AC)	
2	Red and Green turn off.	Power supply OFF. (Standby) (North America)	
3	Red light solid and Green off.	Power supply ON.	
4	Red and Green lights solid.	Touched the touchpad	
5	Green blinks at 1-second intervals; Red off.	Lamp LPS mode	
6	Green blinks at 0.3-second intervals; Red lights solid.	The lamp is not working properly.	The TV automatically will try to restart itself eight times.
7	Green lights solid and Red blinks at 0.5-second intervals.	The lamp unit door is not seated properly. (U)	Turn the POWER OFF and unplug the power cord. Review "Lamp Unit Replacement" on pages 8-10 to ensure that the lamp unit door is installed securely.
8	Green and Red blink at 1-second intervals.	The lamp is not working properly after the eight automatic restart (see item #7). (U)	Turn the POWER OFF and then ON again. If the problem persists, replace the lamp unit (see pages 8-10).
9	Red blinks at 0.5-second intervals; Green off.	FAN (Light engine unit) has stopped.	• Is the output voltage of the supply voltage regulator for the FAN in the power circuit normal? • Has dust accumulated in the FAN? → If the output voltage is not abnormal, replace the faulty FAN with a new one.
10	Red blinks at 1-second intervals; Green off.	BUS line is damaged	• Check the faulty device through the self diagnostics function under SERVICE mode. • Does BUS line (SCL, SDA) work normally? → If the BUS line is under abnormal conditions, replace the faulty device with a new one.
11	Red blinks three times; Green off.	The color wheel has stopped.	• Is the output voltage of the power supply circuit normal? → If the output voltage is normal, replace the engine with a new one.
12	Red and Green blink three times.	Temperature rises abnormally.	• Is the ventilating hole in the set (exhaust slot on the rear) blocked or covered? • Is FAN rotating normally? • Has dust accumulated in the ventilating hole? → If no abnormally conditions are found, replace the engine with a new one.

(U) is restoration by the user.

SETTING & ADJUSTING DATA

【SERVICE MODE】

ADJUSTING ITEMS AND DATA IN THE SERVICE MODE:

Item	Name of adjustment	Preset	Data
RCUT	R CUT OFF	60H	←
GCUT	G CUTOFF	60H	←
BCUT	B CUT OFF	64H	←
RDRV	R DRIVE	48H	←
GDRV	G DRIVE	53H	←
BDRV	B DRIVE	5FH	←
BRTC	BRIGHT CENTER	76H	←
SCNT	SUB CONTRAST FOR TV	20H	←
COLC	COLOR CENTER	D0H	←
UVTT	BASE BAND TINT	40H	←
CNTX	SUB CONTRAST MAX	7FH	←
HPOS	H-POSITION (PAL/DFS)	00H	←
VPOS	V-POSITION DC SHIFT (PAL/DFS)	00H	←
CWDH	COLOR WHEEL DELAY (HIGH)	00H	←
CWDL	COLOR WHEEL DELAY (LOW)	FAH	←
DMDB	DMD BIAS	03H	←
OPT0	TV SET OPTION 0	00H	←

Item	Name of adjustment	Preset	Data
OPT1	TV SET OPTION 1	A0H	←
TVOP	TV OPTION	40H	←
PLLW0	PLL WAIT TIME	14H	←
PLLW1	PLL WAIT TIME	03H	←
PLLW2	PLL WAIT TIME	0FH	←
PLLW3	PLL WAIT TIME	05H	←
PLLW4	PLL WAIT TIME	14H	←
PLLW5	PLL WAIT TIME	04H	←
V01	VOLUME (DATA)	23H	←
V25	VOLUME (DATA)	4AH	←
V50	VOLUME (DATA)	63H	←
V75	VOLUME (DATA)	6FH	←
V100	VOLUME (DATA)	73H	←
MODH	MODUS DATA HIGH	20H	←
MODL	MODUS DATA LOW	91H	←
PRES	FMAM PRESCALE	24H	←
SCTH	VOLUME SCART OPTION HIGH	73H	←
SCTL	VOLUME SCART OPTION LOW	01H	←

Table-1

Note:
The image system data of RCUT-CNTX is different by each image format.
The NTSC value is indicated in the table.

LAMP UNIT REPLACEMENT

Cautions when replacing LAMP UNIT (E998Z; PJ-D95-LMP)

The light source for this TV is a mercury lamp with internal atmospheric pressure that increases during use. The lamp has a limited service life that varies depending on user settings. If you use the lamp beyond its service life:

- you may notice a reduction in the colors and/or brightness of the picture; and
- the strength of the quartz glass in the lamp will be reduced and the lamp may rupture (often making a loud noise when this happens). If the lamp reputres, the TV will not operate until the lamp unit is replaced.

Note: The lamp unit is designed so broken lamp glass remains securely inside the lamp unit.

CAUTION: Always handle the lamp unit with care.
The lamp unit in this TV was designed for safe replacement by consumers; however, if the lamp unit is subjected to intentional abuse (such as excessive mechanical abuse or handling by children or pets), the unit may break, exposing edges or pinch points.

When to replace the lamp unit

You should replace the lamp unit:

- if the picture darkens and/or colors fade;
- if the lamp does not light; or
- If you hear a loud noise and the picture goes black, which may indicate a lamp rupture (LED indication #8). See LED indications on page 6.

Note: Be sure wear the gloves before replacing the lamp unit.

1. Turn off the TV and unplug the power cord.

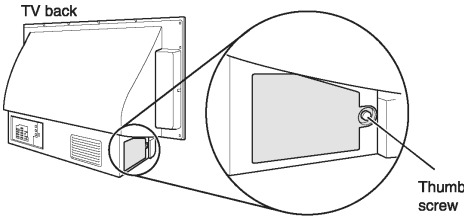
WARNING: Eye damage may result from directly viewing the light produced by this lamp. Always turn off the TV and unplug the power cord before opening the lamp unit door.

2. STOP! Allow the lamp to cool for at least one (1) hour before replacing it.

CAUTION: HOT SURFACE

The temperature of the lamp immediately after use exceeds 392 F (200 C). Touching the lamp at this temperature will result in injury. **ALLOW THE LAMP TO COOL FOR AT LEAST ONE (1) HOUR BEFORE REPLACING IT.**

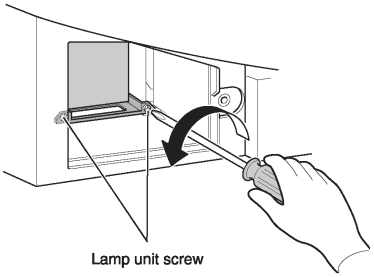
3. On the back of the TV, loosen the thumb screw (by hand) on the lamp unit door, and then remove the lamp unit door.



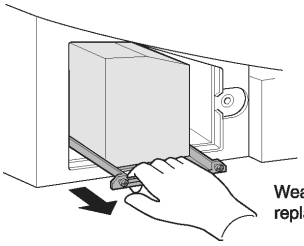
Lamp unit door detail

WARNING: The lamp unit door is provided with an interlock to reduce the risk of electric shock and excessive ultraviolet radiation. **Never defeat its purpose or attempt to service without removing the lamp unit door completely.** Failure to follow this WARNING may result in death or serious injury.

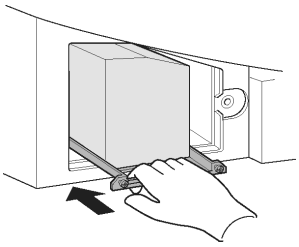
4. Using a manual screwdriver, loosen two screws on the lamp unit.


Lamp unit screw

5. Grasp the lamp unit handle and gently pull the lamp unit straight out of the TV. Set the old lamp unit aside.

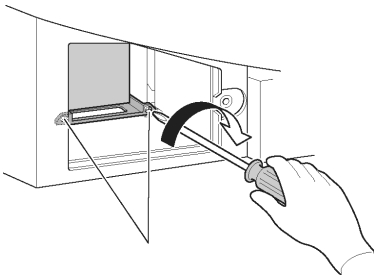

Wear gloves when replacing the lamp unit

6. Carefully insert the new lamp unit straight into the TV until it is fully seated.



Note :
- Never subject the lamp unit to excessive shock.
- Never touch the lamp unit glass or otherwise get it dirty.
- Doing so may affect the image quality and reduce the service life of the lamp. See “Cleaning the lamp unit glass” below.

7. Using a manual screwdriver, tighten two lamp unit screws.
Note:Hand-tighten only. Do not use an electric screwdriver.

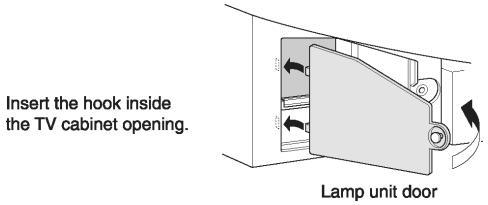

Lamp unit screw
(hand-tighten only)

Cleaning the lamp unit glass

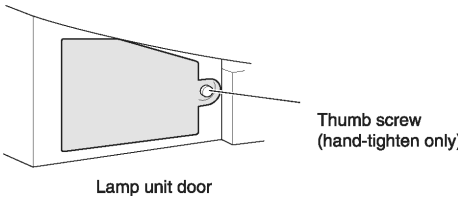
If you accidentally touch the lamp unit glass or otherwise get it dirty, wipe it with a lint-free lens cleaning cloth (such as a cloth for cleaning camera lenses or eyeglasses).

CAUTION: NEVER clean a hot lamp with any type of flammable liquid or aerosol cleaning agent. Many ordinary cleaning agents (such as glass cleaners) contain chemicals that may be flammable at certain temperatures. If the lamp unit is not allowed to cool for at least one (1) hour, such chemicals may ignite.

8. Reattach the lamp unit door, making sure to insert the hook on the left side of the lamp unit door inside the opening in the TV cabinet.



9. Replace the thumb screw and hand-tighten.



NOTE: Make sure the lamp unit and screw are installed securely; otherwise, the TV may not turn on and the lamp life may be shortened.

10. Plug in the power cord and turn on the TV. After the initial warmup period (which may take up to 45 seconds for full picture brightness), the TV should operate normally. If any of the following conditions exist, turn off the TV, unplug the power cord, and repeat steps 1-9 to ensure that the lamp unit and lamp unit door are installed correctly:
    - No picture
    - Dark picture
    - TV will not turn on

LIGHT ENGINE REPLACEMENT

Cautions when replacing LIGHT ENGINE

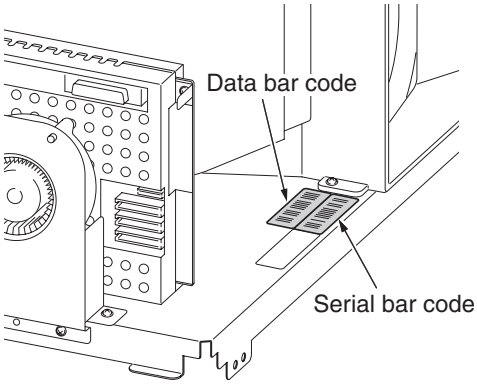
LIGHT ENGINE UNIT:

A271 : LV-672 TB 0B ; 52HM85, LV-672 TB 0D ; 62HM85
(Including with E998Z, SK01 to SK04, SK06, SK08 and SK09.)

- LIGHT ENGINE is a heart of the TV and emits high heat. Make sure to replace it after turning off the TV and wait for sufficient cool down. (More than one hour is recommended.)
- Do not impact during replacement; otherwise, some parts may be damaged.
- Do not touch optical lens. Adhesion of dirt may deteriorate its performance.
- Do not loosen any screw other than those to be removed for adjustment or replacement.
- LIGHT ENGINE emits ultraviolet rays when the TV is ON. Make sure to be careful.

1. Replacement of Light Engine Unit

1-1. When Light Engine Unit is replaced with a new one, adjustment is required. Adjusted values are described in bar code, and the values of bar code must be converted to the adjusted values for the setup. There are 2 types of bar code.



Serial bar code
Ex. 52A000A111111
Inch size
Serial numbers

Data bar code (CW: color wheel)
Ex. A000000B1111
CWdelay number: 4digits
DMD bias value
Substrate serial numbers

1-2. Adjustment is made from service mode. The adjusting items consist of CWDL, CWDH and DMDB.

CWDL CWDH

When CW delay number of the data bar code is 0450:

0450 indicates ⇒ 450 ⇒ 45.0
Double 45.0 to form hexadecimal number (HEX).

45.0 x 2=90 ⇒ 5A (hexadecimal)
The adjusted value becomes “5A” for CWDL and “00” for CWDH.
If hexadecimal number forms 3 or 4 digits, the latter 2 digits indicate CWDL while the first 2 digits indicate CWDH.
(For 3 digits, CWDH=0*)

Note:
For converting decimal number to hexadecimal number, see the conversion table on the next page.

DMDB

Read DMD bias value described in alphabet from the data bar code. In service mode, DMDB value is converted and fixed by the following table.

DMD value in bar code	Adjusted value (Hex)
B	00
C	01
D	02
E	03
F	04

Refer to Service Mode for adjusting the service mode.

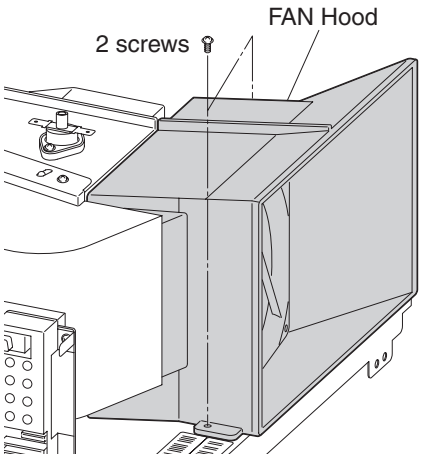
Conversion Table for Decimal and Hexadecimal Numbers

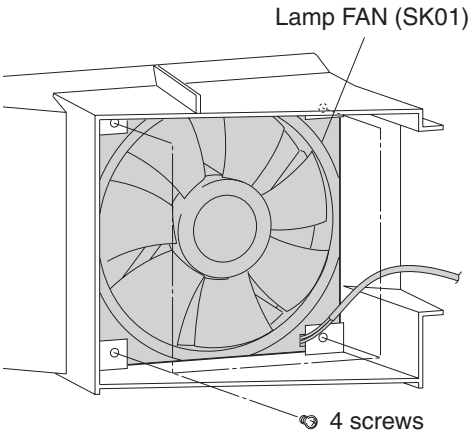
CW delay number	CWDH	CWDL
0000	00	00
0005	00	01
0010	00	02
0015	00	03
0020	00	04
0025	00	05
0030	00	06
0035	00	07
0040	00	08
0045	00	09
0050	00	0A
0055	00	0B
0060	00	0C
0065	00	0D
0070	00	0E
0075	00	0F
0080	00	10
0085	00	11
0090	00	12
0095	00	13
0100	00	14
0105	00	15
0110	00	16
0115	00	17
0120	00	18
0125	00	19
0130	00	1A
0135	00	1B
0140	00	1C
0145	00	1D
0150	00	1E
0155	00	1F
0160	00	20
0165	00	21
0170	00	22
0175	00	23
0180	00	24
0185	00	25
0190	00	26
0195	00	27
0200	00	28
0205	00	29
0210	00	2A
0215	00	2B
0220	00	2C
0225	00	2D
0230	00	2E
0235	00	2F
0240	00	30
0245	00	31
0250	00	32
0255	00	33
0260	00	34
0265	00	35
0270	00	36
0275	00	37
0280	00	38
0285	00	39
0290	00	3A
0295	00	3B
0300	00	3C
0305	00	3D
0310	00	3E
0315	00	3F
0320	00	40
0325	00	41
0330	00	42
0335	00	43
0340	00	44
0345	00	45
0350	00	46
0355	00	47
0360	00	48
0365	00	49
0370	00	4A
0375	00	4B
0380	00	4C
0385	00	4D
0390	00	4E
0395	00	4F
0400	00	50
0405	00	51
0410	00	52
0415	00	53
0420	00	54
0425	00	55
0430	00	56
0435	00	57
0440	00	58
0445	00	59
0450	00	5A
0455	00	5B
0460	00	5C
0465	00	5D
0470	00	5E
0475	00	5F
0480	00	60
0485	00	61
0490	00	62
0495	00	63
0500	00	64
0505	00	65
0510	00	66
0515	00	67
0520	00	68
0525	00	69
0530	00	6A
0535	00	6B
0540	00	6C
0545	00	6D
0550	00	6E
0555	00	6F
0560	00	70
0565	00	71
0570	00	72
0575	00	73
0580	00	74
0585	00	75
0590	00	76
0595	00	77
0600	00	78
0605	00	79
0610	00	7A
0615	00	7B
0620	00	7C
0625	00	7D
0630	00	7E
0635	00	7F
0640	00	80
0645	00	81
0650	00	82
0655	00	83
0660	00	84
0665	00	85
0670	00	86
0675	00	87
0680	00	88
0685	00	89
0690	00	8A
0695	00	8B
0700	00	8C
0705	00	8D
0710	00	8E
0715	00	8F
0720	00	90
0725	00	91
0730	00	92
0735	00	93
0740	00	94
0745	00	95
0750	00	96
0755	00	97
0760	00	98
0765	00	99
0770	00	9A
0775	00	9B
0780	00	9C
0785	00	9D
0790	00	9E
0795	00	9F
0800	00	A0
0805	00	A1
0810	00	A2
0815	00	A3
0820	00	A4
0825	00	A5
0830	00	A6
0835	00	A7
0840	00	A8
0845	00	A9
0850	00	AA
0855	00	AB
0860	00	AC
0865	00	AD
0870	00	AE
0875	00	AF
0880	00	B0
0885	00	B1
0890	00	B2
0895	00	B3
0900	00	B4
0905	00	B5
0910	00	B6
0915	00	B7
0920	00	B8
0925	00	B9
0930	00	BA
0935	00	BB
0940	00	BC
0945	00	BD
0950	00	BE
0955	00	BF
0960	00	C0
0965	00	C1
0970	00	C2
0975	00	C3
0980	00	C4
0985	00	C5
0990	00	C6
0995	00	C7
1000	00	C8
1005	00	C9
1010	00	CA
1015	00	CB
1020	00	CC
1025	00	CD
1030	00	CE
1035	00	CF
1040	00	D0
1045	00	D1
1050	00	D2
1055	00	D3
1060	00	D4
1065	00	D5
1070	00	D6
1075	00	D7
1080	00	D8
1085	00	D9
1090	00	DA
1095	00	DB
1100	00	DC
1105	00	DD
1110	00	DE
1115	00	DF
1120	00	E0
1125	00	E1
1130	00	E2
1135	00	E3
1140	00	E4
1145	00	E5
1150	00	E6
1155	00	E7
1160	00	E8
1165	00	E9
1170	00	EA
1175	00	EB
1180	00	EC
1185	00	ED
1190	00	EE
1195	00	EF
1200	00	F0
1205	00	F1
1210	00	F2
1215	00	F3
1220	00	F4
1225	00	F5
1230	00	F6
1235	00	F7
1240	00	F8
1245	00	F9
1250	00	FA
1255	00	FB
1260	00	FC
1265	00	FD
1270	00	FE
1275	00	FF
1280	01	00
1285	01	01
1290	01	02
1295	01	03
1300	01	04
1305	01	05
1310	01	06
1315	01	07
1320	01	08
1325	01	09
1330	01	0A
1335	01	0B
1340	01	0C
1345	01	0D
1350	01	0E
1355	01	0F
1360	01	10
1365	01	11
1370	01	12
1375	01	13
1380	01	14
1385	01	15
1390	01	16
1395	01	17
1400	01	18
1405	01	19
1410	01	1A
1415	01	1B
1420	01	1C
1425	01	1D
1430	01	1E
1435	01	1F
1440	01	20
1445	01	21
1450	01	22
1455	01	23
1460	01	24
1465	01	25
1470	01	26
1475	01	27
1480	01	28
1485	01	29
1490	01	2A
1495	01	2B
1500	01	2C
1505	01	2D
1510	01	2E
1515	01	2F
1520	01	30
1525	01	31
1530	01	32
1535	01	33
1540	01	34
1545	01	35
1550	01	36
1555	01	37
1560	01	38
1565	01	39
1570	01	3A
1575	01	3B
1580	01	3C
1585	01	3D
1590	01	3E
1595	01	3F
1600	01	40
1605	01	41
1610	01	42
1615	01	43
1620	01	44
1625	01	45
1630	01	46
1635	01	47
1640	01	48
1645	01	49
1650	01	4A
1655	01	4B
1660	01	4C
1665	01	4D
1670	01	4E
1675	01	4F
1680	01	50
1685	01	51
1690	01	52
1695	01	53
1700	01	54
1705	01	55
1710	01	56
1715	01	57
1720	01	58
1725	01	59
1730	01	5A
1735	01	5B
1740	01	5C
1745	01	5D
1750	01	5E
1755	01	5F
1760	01	60
1765	01	61
1770	01	62
1775	01	63
1780	01	64
1785	01	65
1790	01	66
1795	01	67

PARTS REPLACEMENT IN LIGHT ENGINE

1. Replacement of Lamp FAN (SK01)

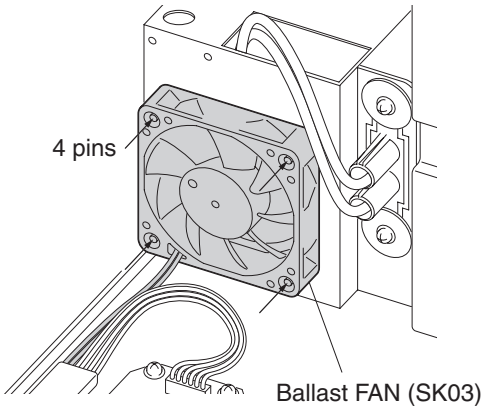
1-1. Replace the FAN for cooling Lamp (SK01), remove 2 screws on the FAN hood, and then remove 4 screws on the FAN for cooling Lamp.





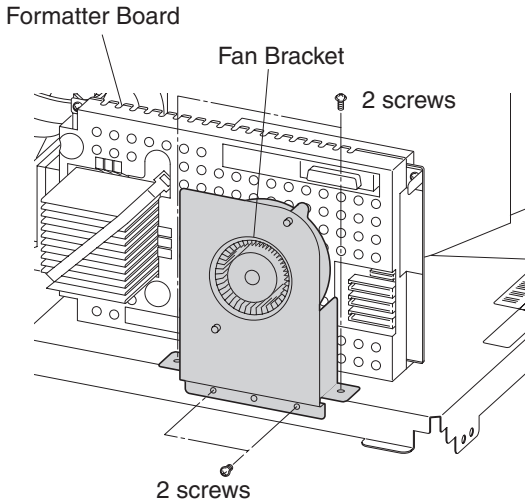
2. Replacement of Ballast FAN (SK03)

2-1. Replace the FAN for cooling Ballast Power Unit (SK03), remove the 4 pins by pressing into the unit, and then remove the FAN for cooling Ballast Power Unit.
NOTE:
Reinstalling the FAN for cooling Ballast Power Unit, attach the 4 pins by using removed them after replacing the FAN.

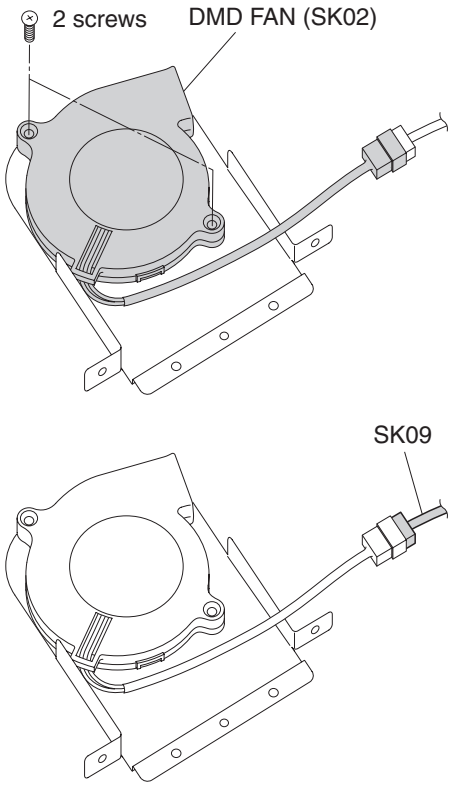


3. Replacement of DMD FAN (SK02) and FAN Transfer Cable (SK09)

3-1. Replace the FAN for cooling Formatter Board, detach the bracket with FAN by removing the 4 screws on the bracket.

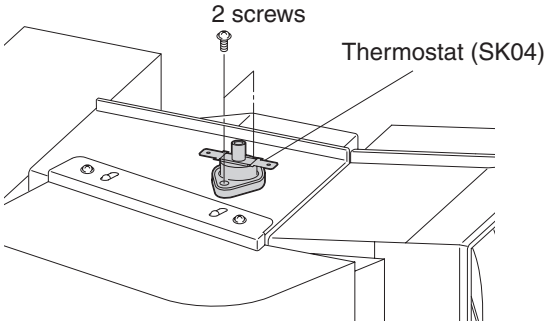


3-2. Remove the 2 screws from the bracket, and then remove the FAN for cooling Formatter Board (SK02).
3-3. Disconnect and replace the FAN transfer cable between Ballast and Formatter Boards (SK09).



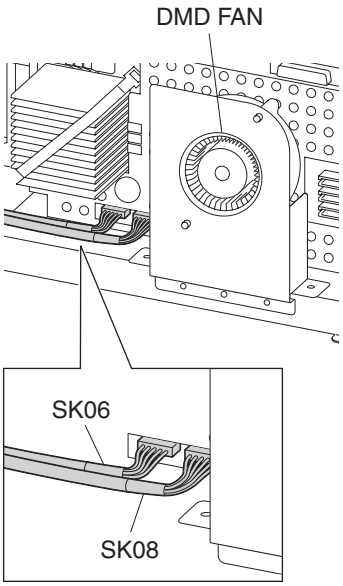
4. Replacement of Thermostat (Lamp Sensor) (SK04)

4-1. Replace the Thermostat (Lamp Sensor) (SK04), remove 2 screws on the Thermostat.



5. Replacement of Ballast to Formatter Board Cables (SK06 and SK08)

5-1. Disconnect and replace the cable between Ballast and Formatter Boards (SK06).
5-2. Disconnect and replace the cable between Smooth Picture and Formatter Boards (SK08).



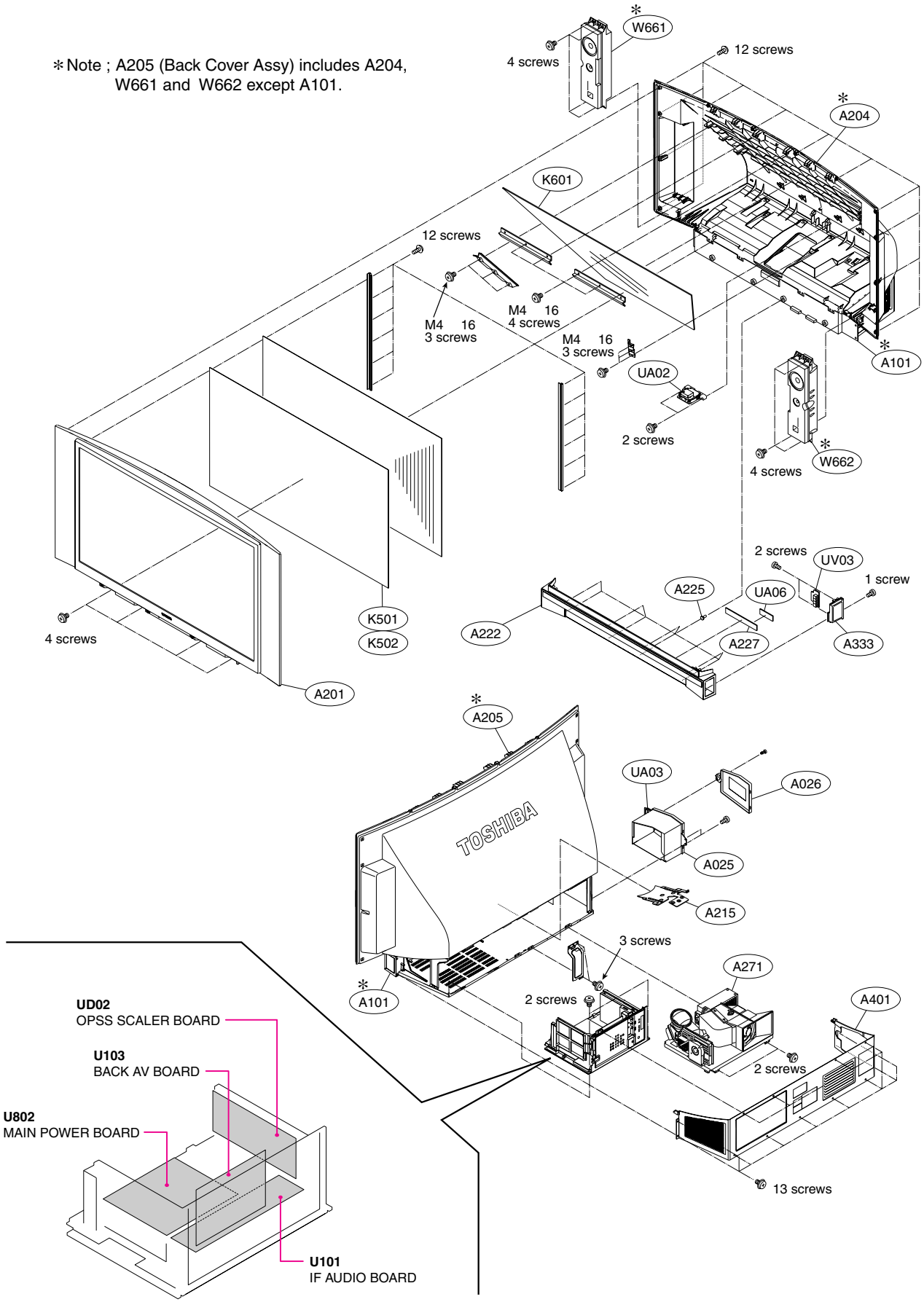
8. LIGHT ENGINE UNIT

Location No.		Parts No.	Description
⚠ A271	#1	23405474	OPTICAL ENGINE, LV-672 TB 0B (Incl. E998Z, SK01-SK04, SK06,SK08,SK09)
⚠	#2	23405476	OPTICAL ENGINE, LV-672 TB 0D (Incl. E998Z, SK01-SK04, SK06,SK08,SK09)
E998Z		23311153	EXCHANGE LAMP, PJ-D95-LMP
SK01		23587525	SERVICE KIT, LAMP FAN
SK02		23587526	SERVICE KIT, DMD FAN
SK03		23587527	SERVICE KIT, BALLAST FAN
SK04		23587528	SERVICE KIT, THERMOSTAT
SK06		23587536	SERVICE KIT, B TO F CABLE
SK08		23587538	SERVICE KIT, S TO F CABLE
SK09		23587539	SERVICE KIT, FAN TRANSFER CABLE

Note; #1: 52HM85 #2: 62HM85

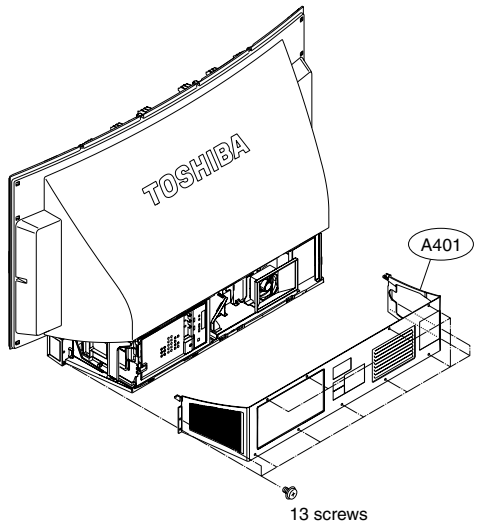
EXPLODED VIEW

✻Note ; A205 (Back Cover Assy) includes A204, W661 and W662 except A101.

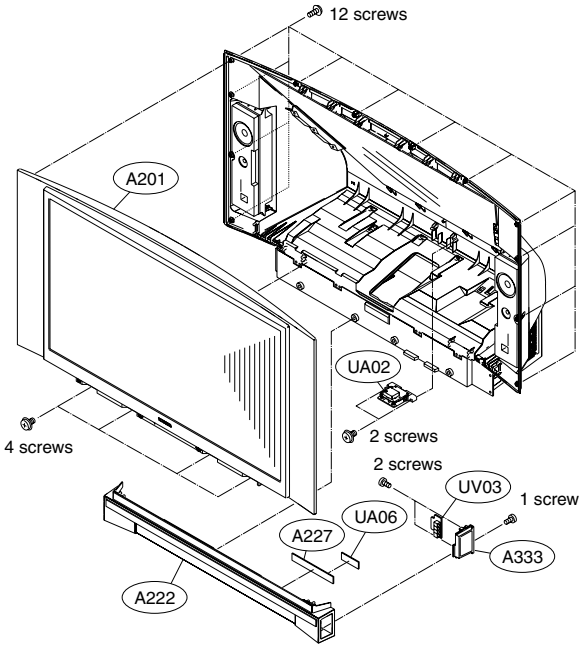


MECHANICAL DISASSEMBLY

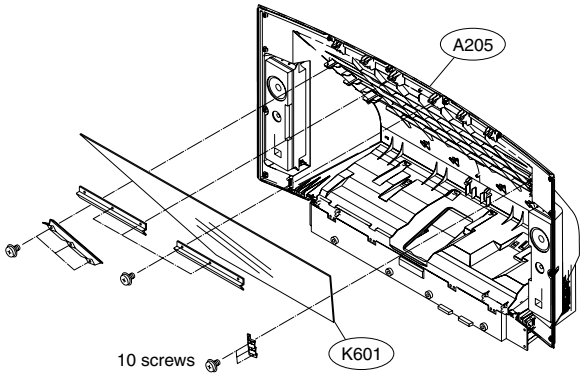
1 Rear Cover Removal



2 Touchpad & Bezel Ass'y Removal

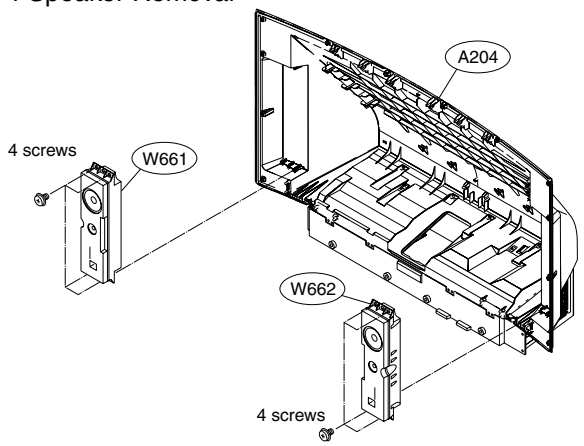


3 Mirror Removal

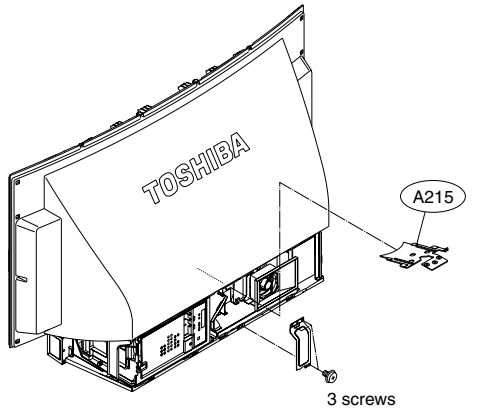


Note ; A205 includes A204, W661 and W662.

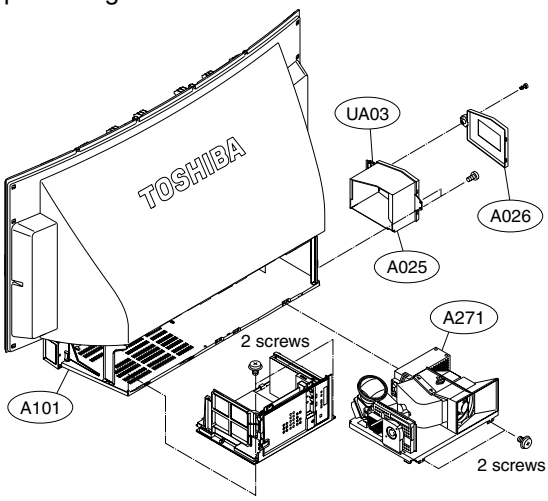
4 Speaker Removal



5 Bracket Removal



6 Optical Engine Removal



CHASSIS AND CABINET REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE. Do not degrade the safety of the receiver through improper servicing.

NOTICE:

The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

The PC board assembly with ∗ mark is no longer available after the end of the production.

Model : 52HM85/62HM85

Capacitors	CD	: Ceramic Disk	PF	: Plastic Film	EL	: Electrolytic
Resistors	CF	: Carbon Film	CC	: Carbon Composition	MF	: Metal Film
	OMF	: Oxide Metal Film	VR	: Variable Resistor	FR	: Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Parts No.	Description
#1 : [52HM85]		
#2 : [62HM85]		
CAPACITORS		
C101	76797339	ELECTROLYTIO, 50V 3.3UF M
C102	76665221	ELECTROLYTIC, 10V 220UF M 3A
C105	76100102	CERAMIC CHIP, 50V F 1000PF Z
C106	76669479	ELECTROLYTIC, 50V 4.7UF M
C107	76666221	ELECTROLYTIC, 16V 220UF M
C108	76665221	ELECTROLYTIC, 10V 220UF M 3A
C109	76100104	CERAMIC CHIP, 25V F 0.1UF Z
C110	76794101	ELECTROLYTIC, 16V 100UF M
C601	76109122	CERAMIC CHIP, 50V B 1200PF K
C602	76109122	CERAMIC CHIP, 50V B 1200PF K
C603	76073084	ELECTROLYTIC, 50V 4.7UF M 3A
C604	76073084	ELECTROLYTIC, 50V 4.7UF M 3A
C605	76073086	ELECTROLYTIC, 50V 10UF M 3A
C606	76073086	ELECTROLYTIC, 50V 10UF M 3A
C607	76073053	ELECTROLYTIC, 25V 100UF M 3A
C608	76073086	ELECTROLYTIC, 50V 10UF M 3A
C612	76073054	ELECTROLYTIC, 25V 220UF M 3A
C621	76109822	CERAMIC CHIP, 50V B 8200PF K
C622	76109822	CERAMIC CHIP, 50V B 8200PF K
C661	76073084	ELECTROLYTIC, 50V 4.7UF M 3A
C662	76073086	ELECTROLYTIC, 50V 10UF M 3A
C663	76073086	ELECTROLYTIC, 50V 10UF M 3A
C665	76109103	CERAMIC CHIP, 50V B 0.01UF K
C666	76073084	ELECTROLYTIC, 50V 4.7UF M 3A
C667	76794100	ELECTROLYTIC, 16V 10UF M
C668	76105560	CERAMIC CHIP, 50V CH 56PF J
C669	76105560	CERAMIC CHIP, 50V CH 56PF J
C680	76073073	ELECTROLYTIC, 35V 2200UF M 3A
C681	76109103	CERAMIC CHIP, 50V B 0.01UF K
C682	76073082	ELECTROLYTIC, 50V 2.2UF M 3A
C683	76073053	ELECTROLYTIC, 25V 100UF M 3A
C684	76795470	ELECTROLYTIC, 25V 47UF M
⚠ C801	76503004	PLASTIC FILM, AC275V 0.47UF M
⚠ C803	76503002	PLASTIC FILM, AC275V 0.22UF M
C805	76092281	CERAMIC DISC, AC250V E 4700PF
C809	76086067	CHEMICON 200V 102M LGQ2D102MESHTL
C810	76086067	CHEMICON 200V 102M LGQ2D102MESHTL
⚠ C811	76092557	CERAMIC DISC, AC250V E 2200PF M
⚠ C812	76092557	CERAMIC DISC, AC250V E 2200PF M
⚠ C814	76092553	CERAMIC DISC, AC250V B 470PF K
⚠ C816	76092555	CERAMIC DISC, AC250V E 1000PF M
C840	76679220	ELECTROLYTIC, 250V 22UF M 3A

Location No.	Parts No.	Description
C841	76073043	ELECTROLYTIC, 16V 2200UF M 3A
C842	76503041	PLASTIC FILM , 63V 0.1UF J
C843	76092333	CERAMIC DISC, 2KV 100PF K
C845	76073082	ELECTROLYTIC, 50V 2.2UF M 3A
C848	76073039	ELECTROLYTIC, 16V 220UF M 3A
C861	76092342	CERAMIC DISC, 2KV R 560PF K
C862	76503045	PLASTIC FILM, 63V 0.22UF J
C863	76212221	CERAMIC DISC, 50V B 220PF K
C864	76590681	PLASTIC FILM, 50V 680PF J
C865	76073063	ELECTROLYTIC, 35V 4.7UF M 3A
C866	76820223	PLASTIC FILM, 630V 0.022UF J
C868	76073068	ELECTROLYTIC, 35V 100UF M 3A
C883	76567104	PLASTIC FILM, 50V 0.1UF J
C884	76214331	CERAMIC DISC, 500V B 330PF K
C885	76073191	ELECTROLYTIC, 35V 1500UF M 3A
C886	76214331	CERAMIC DISC, 500V B 330PF K
C887	76676470	ELECTROLYTIC, 100V 47UF M 3A
C888	76214331	CERAMIC DISC, 500V B 330PF K
C889	76073171	ELECTROLYTIC, 25V 820UF M 3A
C890	76214331	CERAMIC DISC, 500V B 330PF K
C891	76073161	ELECTROLYTIC, 16V 3900UF M 3A
C892	76214331	CERAMIC DISC, 500V B 330PF K
C893	76073173	ELECTROLYTIC, 10V 3900UF M 3A
C894	76214331	CERAMIC DISC, 500V B 330PF K
C895	76073075	ELECTROLYTIC, 35V 4700UF M 3A
C898	76503041	PLASTIC FILM , 63V 0.1UF J
C8200	76073067	ELECTROLYTIC, 35V 47UF M 3A
C8201	76503047	PLASTIC FILM, 63V 0.33UF J
C8202	76073169	ELECTROLYTIC, 25V 470UF M 3A
C8210	76073172	ELECTROLYTIC, 25V 1000UF M 3A
C8211	76503041	PLASTIC FILM , 63V 0.1UF J
C8212	76214221	CERAMIC DISC, 500V B 220PF K
C8213	76503041	PLASTIC FILM , 63V 0.1UF J
C8214	76617006	ELECTROLYTIC, 25V 820UF M
C8215	76073138	ELECTROLYTIC, 10V 220UF M 3A
C8220	76073068	ELECTROLYTIC, 35V 100UF M 3A
C8221	76073169	ELECTROLYTIC, 25V 470UF M 3A
C8224	76073087	ELECTROLYTIC, 50V 22UF M 3A
C8225	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8240	76073038	ELECTROLYTIC, 16V 100UF M 3A
C8241	76503047	PLASTIC FILM, 63V 0.33UF J
C8242	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8250	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8251	76567334	PLASTIC FILM, 50V 0.33UF J
C8252	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8253	76669339	ELECTROLYTIC, 50V 3.3UF M

Location No.	Parts No.	Description
C8905	76073002	ELECTROLYTIC, 6.3V 220UF M 3A
C8911	76503047	PLASTIC FILM, 63V 0.33UF J
C8912	76503047	PLASTIC FILM, 63V 0.33UF J
C8921	76073141	ELECTROLYTIC, 10V 1000UF M 3A
C8930	76073067	ELECTROLYTIC, 35V 47UF M 3A
C8931	76503047	PLASTIC FILM, 63V 0.33UF J
C8932	76073152	ELECTROLYTIC, 16V 330UF M 3A
C8933	76073069	ELECTROLYTIC, 35V 220UF M 3A
C8940	76073067	ELECTROLYTIC, 35V 47UF M 3A
C8941	76503047	PLASTIC FILM, 63V 0.33UF J
C8942	76073152	ELECTROLYTIC, 16V 330UF M 3A
C8943	76073069	ELECTROLYTIC, 35V 220UF M 3A
CA81	76109333	CERAMIC CHIP, 25V B 0.033UF K
CA82	76109123	CERAMIC CHIP, 50V B 0.012UF K
CA83	76109103	CERAMIC CHIP, 50V B 0.01UF K
CA84	76109333	CERAMIC CHIP, 25V B 0.033UF K
CA85	76109273	CERAMIC CHIP, 25V B 0.027UF K
CA86	76109123	CERAMIC CHIP, 50V B 0.012UF K
CA87	76109123	CERAMIC CHIP, 50V B 0.012UF K
CA88	76109333	CERAMIC CHIP, 25V B 0.033UF K
CA91	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA92	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA93	76619040	ELECTROLYTIC CHIP, 16V 10UF M 3A
CA94	76619040	ELECTROLYTIC CHIP, 16V 10UF M 3A
CA95	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA96	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA914	76619040	ELECTROLYTIC CHIP, 16V 10UF M 3A
CA915	76092730	CERAMIC CHIP, 16V B 0.1UF K
CA916	76092730	CERAMIC CHIP, 16V B 0.1UF K
CB01	76794470	ELECTROLYTIC, 16V 47UF M
CB81	76092730	CERAMIC CHIP, 16V B 0.1UF K
CB82	76092730	CERAMIC CHIP, 16V B 0.1UF K
CB83	76092730	CERAMIC CHIP, 16V B 0.1UF K
CB99	76092730	CERAMIC CHIP, 16V B 0.1UF K
CS01	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS02	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS03	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS04	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS05	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS06	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS07	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS08	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS09	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS10	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS11	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS12	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS13	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS14	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS15	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS16	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
CS25	76109103	CERAMIC CHIP, 50V B 0.01UF K
CS26	76794470	ELECTROLYTIC, 16V 47UF M
CS27	76794220	ELECTROLYTIC, 16V 22UF M
CS28	76794100	ELECTROLYTIC, 16V 10UF M
CS29	76794100	ELECTROLYTIC, 16V 10UF M
CS30	76794100	ELECTROLYTIC, 16V 10UF M
CV01	76092621	CERAMIC CHIP, 10V B 1UF K
CV02	76092621	CERAMIC CHIP, 10V B 1UF K
CV03	76092621	CERAMIC CHIP, 10V B 1UF K
CV04	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV05	76092621	CERAMIC CHIP, 10V B 1UF K
CV06	76092621	CERAMIC CHIP, 10V B 1UF K
CV10	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV11	76092621	CERAMIC CHIP, 10V B 1UF K
CV13	76100104	CERAMIC CHIP, 25V F 0.1UF Z @U103
	76794100	ELECTROLYTIC, 16V 10UF M @UV03
CV14	76092621	CERAMIC CHIP, 10V B 1UF K @U103
	76232103	CERAMIC DISC, 50V F 0.01UF Z @UV03
CV15	76100104	CERAMIC CHIP, 25V F 0.1UF Z @U103
	76232103	CERAMIC DISC, 50V F 0.01UF Z @UV03
CV27	76762471	ELECTROLYTIC, 10V 470UF M
CV29	76763101	ELECTROLYTIC, 16V 100UF M
CV30	76092730	CERAMIC CHIP, 16V B 0.1UF K
CV38	76109102	CERAMIC CHIP, 50V B 1000PF K
CV39	76109102	CERAMIC CHIP, 50V B 1000PF K
CV47	76092621	CERAMIC CHIP, 10V B 1UF K

Location No.	Parts No.	Description
CV70	76794101	ELECTROLYTIC, 16V 100UF M
CV71	76092621	CERAMIC CHIP, 10V B 1UF K
CV72	76794220	ELECTROLYTIC, 16V 22UF M
CV245	76092621	CERAMIC CHIP, 10V B 1UF K
CV246	76092621	CERAMIC CHIP, 10V B 1UF K
CV247	76092621	CERAMIC CHIP, 10V B 1UF K
CV249	76092621	CERAMIC CHIP, 10V B 1UF K
CV250	76092621	CERAMIC CHIP, 10V B 1UF K
CV251	76092621	CERAMIC CHIP, 10V B 1UF K
CV253	76092621	CERAMIC CHIP, 10V B 1UF K
CV254	76092621	CERAMIC CHIP, 10V B 1UF K
CV255	76092621	CERAMIC CHIP, 10V B 1UF K
CY101	76092441	CERAMIC CHIP, 16V F 1UF Z
CY102	76665221	ELECTROLYTIC, 10V 220UF M 3A @U101
	76794101	ELECTROLYTIC, 16V 100UF M @U103
CY103	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CY104	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY105	76100102	CERAMIC CHIP, 50V F 1000PF Z @U101
	76109103	CERAMIC CHIP, 50V B 0.01UF K @U103
CY106	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY107	76794100	ELECTROLYTIC, 16V 10UF M
CY108	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CY109	76105101	CERAMIC CHIP, 50V CH 100PF J
CY111	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY112	76105181	CERAMIC CHIP, 50V CH 180PF J
CY113	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY114	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY115	76105390	CERAMIC CHIP, 50V CH 39PF J
CY116	76105470	CERAMIC CHIP, 50V CH 47PF J
CY117	76105180	CERAMIC CHIP, 50V CH 18PF J
CY160	76815393	CERAMIC CHIP, 50V B 0.039UF K
CY501	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY502	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY504	76109222	CERAMIC CHIP, 50V B 2200PF K
CY505	76105120	CERAMIC CHIP, 50V CH 12PF J
CY506	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY508	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY512	76092463	CERAMIC CHIP, 16V B 0.22UF K
CY513	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY514	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY515	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY516	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY517	76092731	CERAMIC CHIP, 16V B 1UF K
CY524	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY525	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY526	76092730	CERAMIC CHIP, 16V B 0.1UF K
CY538	76761102	ELECTROLYTIC, 6.3V 1000UF M
CY539	76794471	ELECTROLYTIC, 16V 470UF M
CY540	76794471	ELECTROLYTIC, 16V 470UF M
CY541	76761102	ELECTROLYTIC, 6.3V 1000UF M
CY582	76105101	CERAMIC CHIP, 50V CH 100PF J

RESISTORS

R010	76011102	CHIP, 1/20W 1K OHM J
R150	76011332	CHIP, 1/20W 3.3K OHM J
R151	76011562	CHIP, 1/20W 5.6K OHM J
R152	76011103	CHIP, 1/20W 10K OHM J
R173	76011103	CHIP, 1/20W 10K OHM J
R174	76011273	CHIP, 1/20W 27K OHM J
R264	76011750	CHIP, 1/20W 75 OHM J
R265	76011750	CHIP, 1/20W 75 OHM J
R266	76011750	CHIP, 1/20W 75 OHM J
R286	76011750	CHIP, 1/20W 75 OHM J
R287	76011750	CHIP, 1/20W 75 OHM J
R288	76011750	CHIP, 1/20W 75 OHM J
R347	76011101	CHIP, 1/20W 100 OHM J
R348	76011101	CHIP, 1/20W 100 OHM J
R601	76011822	CHIP, 1/20W 8.2K OHM J
R602	76011822	CHIP, 1/20W 8.2K OHM J
R603	76011122	CHIP, 1/20W 1.2K OHM J
R604	76011122	CHIP, 1/20W 1.2K OHM J
R609	76011563	CHIP, 1/20W 56K OHM J
R610	76011223	CHIP, 1/20W 22K OHM J
R611	76011103	CHIP, 1/20W 10K OHM J
R612	76011222	CHIP, 1/20W 2.2K OHM J
R613	76011223	CHIP, 1/20W 22K OHM J

Location No.	Parts No.	Description
R614	76011103	CHIP, 1/20W 10K OHM J
R615	76011104	CHIP, 1/20W 100K OHM J
R616	76011822	CHIP, 1/20W 8.2K OHM J
R621	76011391	CHIP, 1/20W 390 OHM J
R622	76011391	CHIP, 1/20W 390 OHM J
R626	76011223	CHIP, 1/20W 22K OHM J
R627	76011223	CHIP, 1/20W 22K OHM J
R661	76011102	CHIP, 1/20W 1K OHM J
R662	76011333	CHIP, 1/20W 33K OHM J
R663	76011822	CHIP, 1/20W 8.2K OHM J
R665	76011223	CHIP, 1/20W 22K OHM J
R666	76011473	CHIP, 1/20W 47K OHM J
R667	76011223	CHIP, 1/20W 22K OHM J
R668	76011473	CHIP, 1/20W 47K OHM J
R671	76011102	CHIP, 1/20W 1K OHM J
R672	76011333	CHIP, 1/20W 33K OHM J
R673	76011822	CHIP, 1/20W 8.2K OHM J
R674	76011472	CHIP, 1/20W 4.7K OHM J
R676	76011104	CHIP, 1/20W 100K OHM J
R677	76011104	CHIP, 1/20W 100K OHM J
R681	76011222	CHIP, 1/20W 2.2K OHM J
R682	76011473	CHIP, 1/20W 47K OHM J
R683	76011223	CHIP, 1/20W 22K OHM J
R684	76011223	CHIP, 1/20W 22K OHM J
R687	76011103	CHIP, 1/20W 10K OHM J
R688	76011224	CHIP, 1/20W 220K OHM J
R693	76000445	CHIP JUMPER, 1608TYPE
R697	76553561	OXIDE METAL FILM, 1W 560 OHM J
R698	76011103	CHIP, 1/20W 10K OHM J
R699	76011103	CHIP, 1/20W 10K OHM J
R810	76568479	CERAMIC COVERED, 7W 4.7 OHM J
R811	76120001	CEMENT RES 141C 2.1W 1R8 K
R840	76552562	OXIDE METAL FILM, 1/2W 5.6K OHM J
R841	76366102	CARBON FILM, 1/6W 1K OHM J
R842	76376563	CARB0N FILM, 1/2W 56K OHM J
R843	76376563	CARB0N FILM, 1/2W 56K OHM J
R844	76366103	CARBON FILM, 1/6W 10K OHM J
R845	76366102	CARBON FILM, 1/6W 1K OHM J
R846	76366471	CARBON FILM, 1/6W 470 OHM J
R847	76366473	CARBON FILM, 1/6W 47K OHM J
R848	76366102	CARBON FILM, 1/6W 1K OHM J
R849	76552470	OXIDE METAL FILM, 1/2W 47 OHM J
R850	76366103	CARBON FILM, 1/6W 10K OHM J
R860	76382101	OXIDE METAL FILM, 1W 100 OHM J
R861	76383333	OXIDE METAL FILM, 2W 33K OHM J
R862	76019463	METAL PLATE, 2W 0.22 OHM J
R863	76019461	METAL PLATE, 2W 0.15 OHM J
R864	76321828	METAL FILM, 1/2W 0.82 OHM J
R865	76381221	OXIDE METAL FILM, 1/2W 220 OHM J
R866	76366681	CARBON FILM, 1/6W 680 OHM J
R867	76366152	CARBON FILM, 1/6W 1.5K OHM J
R868	76555473	OXIDE METAL FILM, 3W 47K OHM J
R869	76366152	CARBON FILM, 1/6W 1.5K OHM J
R870	76366154	CARBON FILM, 1/6W 150K OHM J
R881	76366222	CARBON FILM, 1/6W 2.2K OHM J
R882	76366471	CARBON FILM, 1/6W 470 OHM J
R885	76366102	CARBON FILM, 1/6W 1K OHM J
R886	76000525	METAL FILM, 1/4W 4.7K OHM F
R887	76367683	CARBON FILM, 1/6W 68K OHM G
R888	76000525	METAL FILM, 1/4W 4.7K OHM F
R889	76383222	OXIDE METAL FILM, 2W 2.2K OHM J
R891	76555331	OXIDE METAL FILM, 3W 330 OHM J
R892	76555331	OXIDE METAL FILM, 3W 330 OHM J
⚠ R899	76005014	METAL FILM, 1W 8.2M OHM J
R8200	76367390	CARBON FILM, 1/6W 390 OHM G
R8210	76000147	METAL FILM, 1/4W 470 OHM F
R8211	76000219	METAL FILM, 1/4W 10 OHM F
R8220	76367390	CARBON FILM, 1/6W 390 OHM G
R8240	76000635	METAL FILM, 1/4W 12K OHM F
R8241	76000529	RESIST0R, METAL FILM, 1/4W 6.8K OHM F
R8242	76367471	CARBON FILM, 1/6W 470 OHM G
R8250	76000145	METAL FILM, 1/4W 330 OHM F
R8251	76000145	METAL FILM, 1/4W 330 OHM F
R8252	76367392	CARBON FILM, 1/6W 3.9K OHM G
R8902	76366333	CARBON FILM, 1/6W 33K OHM J
R8903	76366333	CARBON FILM, 1/6W 33K OHM J

Location No.	Parts No.	Description
R8904	76366472	CARBON FILM, 1/6W 4.7K OHM J
R8905	76366681	CARBON FILM, 1/6W 680 OHM J
R8908	76366104	CARBON FILM, 1/6W 100K OHM J
R8910	76366472	CARBON FILM, 1/6W 4.7K OHM J
R8911	76366103	CARBON FILM, 1/6W 10K OHM J
R8912	76366223	CARBON FILM, 1/6W 22K OHM J
R8913	76366334	CARBON FILM, 1/6W 330K OHM J
R8914	76366223	CARBON FILM, 1/6W 22K OHM J
R8915	76366102	CARBON FILM, 1/6W 1K OHM J
R8922	76366122	CARBON FILM, 1/6W 1.2K OHM J
R8931	76367123	CARBON FILM, 1/6W 12K OHM G
R8932	76367182	CARBON FILM, 1/6W 1.8K OHM G
R8934	76367472	CARBON FILM, 1/6W 4.7K OHM G
R8941	76367123	CARBON FILM, 1/6W 12K OHM G
R8942	76367182	CARBON FILM, 1/6W 1.8K OHM G
R8944	76367472	CARBON FILM, 1/6W 4.7K OHM G
R8950	76366103	CARBON FILM, 1/6W 10K OHM J
R8951	76366103	CARBON FILM, 1/6W 10K OHM J
RA44	76011105	CHIP, 1/20W 1M OHM J
RA48	76011105	CHIP, 1/20W 1M OHM J
RA51	76011105	CHIP, 1/20W 1M OHM J
RA53	76011105	CHIP, 1/20W 1M OHM J
RA55	76011105	CHIP, 1/20W 1M OHM J
RA57	76011105	CHIP, 1/20W 1M OHM J
RA61	76011222	CHIP, 1/20W 2.2K OHM J
RA62	76011222	CHIP, 1/20W 2.2K OHM J
RA63	76011222	CHIP, 1/20W 2.2K OHM J
RA64	76011222	CHIP, 1/20W 2.2K OHM J
RA65	76011222	CHIP, 1/20W 2.2K OHM J
RA66	76011222	CHIP, 1/20W 2.2K OHM J
RA67	76011222	CHIP, 1/20W 2.2K OHM J
RA68	76011222	CHIP, 1/20W 2.2K OHM J
RA71	76011822	CHIP, 1/20W 8.2K OHM J
RA72	76011153	CHIP, 1/2OW 15K OHM J
RA73	76011273	CHIP, 1/20W 27K OHM J
RA75	76011822	CHIP, 1/20W 8.2K OHM J
RA76	76011153	CHIP, 1/2OW 15K OHM J
RA77	76011114	CHIP, 1/20W 110K OHM J
RA81	76011104	CHIP, 1/20W 100K OHM J
RA82	76011104	CHIP, 1/20W 100K OHM J
RA83	76011104	CHIP, 1/20W 100K OHM J
RA84	76011104	CHIP, 1/20W 100K OHM J
RA85	76011104	CHIP, 1/20W 100K OHM J
RA86	76011104	CHIP, 1/20W 100K OHM J
RA87	76011104	CHIP, 1/20W 100K OHM J
RA88	76011104	CHIP, 1/20W 100K OHM J
RA91	76011623	CHIP, 1/20W 62K OHM J
RA94	76000445	CHIP JUMPER, 1608TYPE
RA95	76011623	CHIP, 1/20W 62K OHM J
RA98	76000445	CHIP JUMPER, 1608TYPE
RB15	76366471	CARBON FILM, 1/6W 470 OHM J
RB19	76366470	CARBON FILM, 1/6W 47 OHM J
RB81	76011222	CHIP, 1/20W 2.2K OHM J
RB82	76011471	CHIP, 1/20W 470 OHM J
RB83	76011102	CHIP, 1/20W 1K OHM J
RB84	76011473	CHIP, 1/20W 47K OHM J
RB87	76011394	CHIP, 1/20W 390K OHM J
RB88	76011394	CHIP, 1/20W 390K OHM J
RB89	76011103	CHIP, 1/20W 10K OHM J
RB90	76011302	CHIP, 1/20W 3K OHM J
RB92	76011473	CHIP, 1/20W 47K OHM J
RB93	76011102	CHIP, 1/20W 1K OHM J
RS01	76011562	CHIP, 1/20W 5.6K OHM J
RS02	76011562	CHIP, 1/20W 5.6K OHM J
RS03	76011101	CHIP, 1/20W 100 OHM J
RS04	76011101	CHIP, 1/20W 100 OHM J
RS05	76011562	CHIP, 1/20W 5.6K OHM J
RS06	76011562	CHIP, 1/20W 5.6K OHM J
RS07	76011562	CHIP, 1/20W 5.6K OHM J
RS08	76011562	CHIP, 1/20W 5.6K OHM J
RS09	76011562	CHIP, 1/20W 5.6K OHM J
RS10	76011562	CHIP, 1/20W 5.6K OHM J
RS11	76011562	CHIP, 1/20W 5.6K OHM J
RS12	76011562	CHIP, 1/20W 5.6K OHM J
RS13	76011562	CHIP, 1/20W 5.6K OHM J
RS14	76011562	CHIP, 1/20W 5.6K OHM J

Location No.	Parts No.	Description
RS15	76011562	CHIP, 1/20W 5.6K OHM J
RS16	76011562	CHIP, 1/20W 5.6K OHM J
RS21	76011101	CHIP, 1/20W 100 OHM J
RS22	76011101	CHIP, 1/20W 100 OHM J
RS23	76011101	CHIP, 1/20W 100 OHM J
RS24	76011101	CHIP, 1/20W 100 OHM J
RS27	76011101	CHIP, 1/20W 100 OHM J
RS28	76011101	CHIP, 1/20W 100 OHM J
RS29	76011682	CHIP, 1/20W 6.8K OHM J
RS30	76011182	CHIP, 1/20W 1.8K OHM J
RS31	76011100	CHIP, 1/20W 10 OHM J
RS32	76011222	CHIP, 1/20W 2.2K OHM J
RS33	76011222	CHIP, 1/20W 2.2K OHM J
RS34	76011472	CHIP, 1/20W 4.7K OHM J
RS35	76011102	CHIP, 1/20W 1K OHM J
RS36	76011102	CHIP, 1/20W 1K OHM J
RS37	76011223	CHIP, 1/20W 22K OHM J
RS38	76011223	CHIP, 1/20W 22K OHM J
RV001	76011102	CHIP, 1/20W 1K OHM J
RV01	76011101	CHIP, 1/20W 100 OHM J
RV002	76011101	CHIP, 1/20W 100 OHM J
RV003	76011102	CHIP, 1/20W 1K OHM J
RV03	76011101	CHIP, 1/20W 100 OHM J
RV004	76011101	CHIP, 1/20W 100 OHM J
RV005	76011102	CHIP, 1/20W 1K OHM J
RV006	76011101	CHIP, 1/20W 100 OHM J
RV06	76011101	CHIP, 1/20W 100 OHM J
RV007	76011102	CHIP, 1/20W 1K OHM J
RV07	76011562	CHIP, 1/20W 5.6K OHM J
RV008	76011101	CHIP, 1/20W 100 OHM J
RV08	76011101	CHIP, 1/20W 100 OHM J
RV009	76011101	CHIP, 1/20W 100 OHM J
RV09	76011101	CHIP, 1/20W 100 OHM J
RV10	76011101	CHIP, 1/20W 100 OHM J
RV11	76011101	CHIP, 1/20W 100 OHM J
RV12	76011101	CHIP, 1/20W 100 OHM J
RV14	76011562	CHIP, 1/20W 5.6K OHM J
RV15	76011101	CHIP, 1/20W 100 OHM J
RV17	76011101	CHIP, 1/20W 100 OHM J
RV19	76011101	CHIP, 1/20W 100 OHM J
RV20	76366750	CARBON FILM, 1/6W 75 OHM J
RV21	76011562	CHIP, 1/20W 5.6K OHM J @U103
	76366750	CARBON FILM, 1/6W 75 OHM J @UV03
RV22	76011101	CHIP, 1/20W 100 OHM J @U103
	76366750	CARBON FILM, 1/6W 75 OHM J @UV03
RV23	76011222	CHIP, 1/20W 2.2K OHM J @U103
	76366101	CARBON FILM, 1/6W 100 OHM J @UV03
RV24	76011222	CHIP, 1/20W 2.2K OHM J
RV32	76011104	CHIP, 1/20W 100K OHM J
RV33	76011104	CHIP, 1/20W 100K OHM J
RV34	76011104	CHIP, 1/20W 100K OHM J
RV35	76011750	CHIP, 1/20W 75 OHM J
RV36	76011750	CHIP, 1/20W 75 OHM J
RV37	76011101	CHIP, 1/20W 100 OHM J
RV38	76011562	CHIP, 1/20W 5.6K OHM J
RV40	76011750	CHIP, 1/20W 75 OHM J
RV41	76011750	CHIP, 1/20W 75 OHM J
RV42	76011750	CHIP, 1/20W 75 OHM J
RV43	76011750	CHIP, 1/20W 75 OHM J
RV61	76011101	CHIP, 1/20W 100 OHM J
RV85	76366471	CARBON FILM, 1/6W 470 OHM J
RV86	76366471	CARBON FILM, 1/6W 470 OHM J
RV89	76011680	CHIP, 1/20W 68 OHM J
RV147	76011101	CHIP, 1/20W 100 OHM J
RV148	76011101	CHIP, 1/20W 100 OHM J
RV323	76011101	CHIP, 1/20W 100 OHM J
RV324	76011101	CHIP, 1/20W 100 OHM J
RV325	76011101	CHIP, 1/20W 100 OHM J
RV330	76011101	CHIP, 1/20W 100 OHM J
RV331	76011101	CHIP, 1/20W 100 OHM J
RV332	76011101	CHIP, 1/20W 100 OHM J
RV333	76011181	CHIP, 1/20W 180 OHM J
RV334	76011103	CHIP, 1/20W 10K OHM J
RV335	76011123	CHIP, 1/20W 12K OHM J
RV346	76011101	CHIP, 1/20W 100 OHM J
RY101	76011101	CHIP, 1/20W 100 OHM J

Location No.	Parts No.	Description
RY102	76011221	CHIP, 1/20W 220 OHM J
RY103	76011102	CHIP, 1/20W 1K OHM J
RY104	76011102	CHIP, 1/20W 1K OHM J
RY105	76011821	CHIP, 1/20W 820 OHM J
RY106	76000445	CHIP JUMPER, 1608TYPE
RY107	76011222	CHIP, 1/20W 2.2K OHM J
RY109	76011332	CHIP, 1/20W 3.3K OHM J
RY110	76011152	CHIP, 1/20W 1.5K OHM J
RY160	76011471	CHIP, 1/20W 470 OHM J
RY161	76011101	CHIP, 1/20W 100 OHM J
RY501	76011303	CHIP, 1/20W 30K OHM J
RY502	76011103	CHIP, 1/20W 10K OHM J
RY504	76011103	CHIP, 1/20W 10K OHM J
RY505	76011123	CHIP, 1/20W 12K OHM J
RY507	76011102	CHIP, 1/20W 1K OHM J
RY508	76011222	CHIP, 1/20W 2.2K OHM J
RY509	76011472	CHIP, 1/20W 4.7K OHM J
RY510	76011152	CHIP, 1/20W 1.5K OHM J
RY511	76011222	CHIP, 1/20W 2.2K OHM J
RY512	76011222	CHIP, 1/20W 2.2K OHM J
RY513	76011152	CHIP, 1/20W 1.5K OHM J
RY516	76011472	CHIP, 1/20W 4.7K OHM J
RY517	76011472	CHIP, 1/20W 4.7K OHM J
RY518	76011472	CHIP, 1/20W 4.7K OHM J
RY519	76000445	CHIP JUMPER, 1608TYPE
RY520	76011101	CHIP, 1/20W 100 OHM J
RY521	76011101	CHIP, 1/20W 100 OHM J
RY523	76011102	CHIP, 1/20W 1K OHM J
RY524	76011102	CHIP, 1/20W 1K OHM J
RY525	76011222	CHIP, 1/20W 2.2K OHM J
RY526	76011222	CHIP, 1/20W 2.2K OHM J
RY527	76011222	CHIP, 1/20W 2.2K OHM J
RY528	76011222	CHIP, 1/20W 2.2K OHM J
RY529	76011102	CHIP, 1/20W 1K OHM J
RY530	76011102	CHIP, 1/20W 1K OHM J
RY531	76011102	CHIP, 1/20W 1K OHM J
RY532	76011101	CHIP, 1/20W 100 OHM J
RY533	76011102	CHIP, 1/20W 1K OHM J
RY534	76011102	CHIP, 1/20W 1K OHM J
RY535	76011330	CHIP, 1/20W 33 OHM J
RY536	76011330	CHIP, 1/20W 33 OHM J
RY541	76011392	CHIP, 1/20W 3.9K OHM J
RY542	76011392	CHIP, 1/20W 3.9K OHM J
RY543	76011152	CHIP, 1/20W 1.5K OHM J
RY545	76011101	CHIP, 1/20W 100 OHM J
RY548	76011102	CHIP, 1/20W 1K OHM J
RY550	76011182	CHIP, 1/20W 1.8K OHM J
RY551	76011182	CHIP, 1/20W 1.8K OHM J
RY552	76011152	CHIP, 1/20W 1.5K OHM J
RY560	76011332	CHIP, 1/20W 3.3K OHM J
RY561	76011471	CHIP, 1/20W 470 OHM J
RY573	76011102	CHIP, 1/20W 1K OHM J
RY575	76011103	CHIP, 1/20W 10K OHM J
RY576	76011123	CHIP, 1/20W 12K OHM J
RY578	76011332	CHIP, 1/20W 3.3K OHM J
RY579	76011102	CHIP, 1/20W 1K OHM J
RY580	76011101	CHIP, 1/20W 100 OHM J
RY582	76011332	CHIP, 1/20W 3.3K OHM J
RY583	76011102	CHIP, 1/20W 1K OHM J
RY584	76011101	CHIP, 1/20W 100 OHM J
RY585	76011103	CHIP, 1/20W 10K OHM J
RY586	76011330	CHIP, 1/20W 33 OHM J
RY587	76011330	CHIP, 1/20W 33 OHM J
RY588	76011330	CHIP, 1/20W 33 OHM J
RY589	76000445	CHIP JUMPER, 1608TYPE
RY590	76011103	CHIP, 1/20W 10K OHM J
RY591	76011101	CHIP, 1/20W 100 OHM J
RY592	76011101	CHIP, 1/20W 100 OHM J
RY593	76011330	CHIP, 1/20W 33 OHM J
RY594	76011330	CHIP, 1/20W 33 OHM J
RY595	76011330	CHIP, 1/20W 33 OHM J
RY596	76000445	CHIP JUMPER, 1608TYPE
G101	76011151	CHIP, 1/20W 150 OHM J
G102	76011151	CHIP, 1/20W 150 OHM J
GA89	76000445	CHIP JUMPER, 1608TYPE
GA90	76000445	CHIP JUMPER, 1608TYPE

Location No.	Parts No.	Description
GJ105	76000445	CHIP JUMPER, 1608TYPE
GR103	76000445	CHIP JUMPER, 1608TYPE
JR003	76000445	CHIP JUMPER, 1608TYPE
JR004	76000445	CHIP JUMPER, 1608TYPE
JR005	76000445	CHIP JUMPER, 1608TYPE
JR006	76000445	CHIP JUMPER, 1608TYPE
JR007	76000445	CHIP JUMPER, 1608TYPE
JR008	76000445	CHIP JUMPER, 1608TYPE
JR009	76000445	CHIP JUMPER, 1608TYPE
JR010	76000445	CHIP JUMPER, 1608TYPE
JR011	76000445	CHIP JUMPER, 1608TYPE
JR012	76000445	CHIP JUMPER, 1608TYPE
JR013	76000445	CHIP JUMPER, 1608TYPE
JR014	76000445	CHIP JUMPER, 1608TYPE
JR015	76000445	CHIP JUMPER, 1608TYPE
JR016	76000445	CHIP JUMPER, 1608TYPE
JR017	76000445	CHIP JUMPER, 1608TYPE
JR018	76000445	CHIP JUMPER, 1608TYPE
JR019	76000445	CHIP JUMPER, 1608TYPE
COILS & TRANSFORMERS		
L101	23289027	COIL, PEAKING, TRF4680AT
L103	23289026	COIL, PEAKING, TRF4470AT
L840	23289981	COIL, PEAKING, TRF4330AZ
L841	23103304	FERRITE CHOKE, TEM2011AA
L861	23103304	FERRITE CHOKE, TEM2011AA
L862	23103307	FERRITR CHOKE, TEM2014AA
L881	23103304	FERRITE CHOKE, TEM2011AA
L882	23103304	FERRITE CHOKE, TEM2011AA
L883	23103304	FERRITE CHOKE, TEM2011AA
L884	23103304	FERRITE CHOKE, TEM2011AA
L885	23103304	FERRITE CHOKE, TEM2011AA
L886	23103304	FERRITE CHOKE, TEM2011AA
L888	23248446	COIL, CHOKE, TLN3462AH
L890	23248432	COIL, CHOKE, TLN3499AH
L891	23248432	COIL, CHOKE, TLN3499AH
L892	23248432	COIL, CHOKE, TLN3499AH
L893	23248417	COIL, CHOKE, TLN3481AH
L895	23248432	COIL, CHOKE, TLN3499AH
L896	23289981	COIL, PEAKING, TRF4330AZ
L8210	23289981	COIL, PEAKING, TRF4330AZ
L8211	23248456	COIL, CHOKE, TLN3540AH
L8213	23248417	COIL, CHOKE, TLN3481AH
L8930	23248432	COIL, CHOKE, TLN3499AH
L8931	23248432	COIL, CHOKE, TLN3499AH
L8940	23248432	COIL, CHOKE, TLN3499AH
L8941	23248432	COIL, CHOKE, TLN3499AH
LV13	23246662	COIL, CHIP, TRF4100CN
LV20	23221156	COIL, PEAKING, TRF4560AJ
LY012	23246662	COIL, CHIP, TRF4100CN
LY100	23246656	COIL, CHIP, TRF4330CG
LY101	23248398	COIL, CHOKE, TLN3278D @U101
	23103827	INDUCTOR, BEAD, TEM2120M @U103
LY102	23221144	COIL, PEAKING, TRF4229AJ @U101
	23103827	INDUCTOR, BEAD, TEM2120M @U103
LY103	23221144	COIL, PEAKING, TRF4229AJ @U101
	23103230	INDUCTOR, BEAD, TEM2134AD @U103
LY104	23246653	COIL, CHIP, TRF4150CG
LY105	23246655	COIL, CHIP, TRF4270CG
LY112	23103230	INDUCTOR, BEAD, TEM2134AD
LY501	23246662	COIL, CHIP, TRF4100CN
LY503	23246662	COIL, CHIP, TRF4100CN
⚠ T801	23211827	COIL, LINE FILTER, TRF3239AH
⚠ T802	23211836	COIL, LINE FILTER, TRF3197AH
⚠ T840	23217790	TRANSFORMER, CONVERTER TPW3425BH
⚠ T862	23217682	TRANSFORMER, CONVERTER, TPW3553AS
M802A	23103839	FERRITE CORE, TFE1012
M811A	23103778	FERRITE CORE, TFE1008
M905A	23103778	FERRITE CORE, TFE1008
MB91A	23103840	FERRITE CORE, TFE1013
P800A	23103840	FERRITE CORE, TFE1013
ZB22B	23103840	FERRITE CORE, TFE1013
SEMICONDUCTORS		
Q151	23205346	TRANSISTOR, KTA2014Y/P
Q152	23205347	TRANSISTOR, KTC4075Y/P

Location No.	Parts No.	Description
Q172	23205347	TRANSISTOR, KTC4075Y/P
Q601	23009603	IC, AN7580
Q612	23205346	TRANSISTOR, KTA2014Y/P
Q613	23205347	TRANSISTOR, KTC4075Y/P
Q614	23205426	TRANSISTOR, KRC106S/P
Q661	23205424	TRANSISTOR, KTC2875B/P
Q662	23205424	TRANSISTOR, KTC2875B/P
Q663	23085575	IC, OP AMP, BA4558
Q664	23205428	TRANSISTOR, KRA104S/P
Q681	23205424	TRANSISTOR, KTC2875B/P
Q682	23205424	TRANSISTOR, KTC2875B/P
Q801	23135069	IC, STRF6268S
Q840	23085559	IC, MIP280
⚠ Q841	23000823	IC, PHOTO COUPLER, TLP421F(GR)
⚠ Q842	23000823	IC, PHOTO COUPLER, TLP421F(GR)
Q845	23205499	TRANSISTOR, KTC3198 Y/P
Q846	23205499	TRANSISTOR, KTC3198 Y/P
Q847	23205499	TRANSISTOR, KTC3198 Y/P
⚠ Q862	23000823	IC, PHOTO COUPLER, TLP421F(GR)
Q881	23085389	IC, NJM431L
Q8200	23085050	IC, SI-3120J(LF1101)
Q8210	23085397	IC, SI-8033SS
Q8220	23135077	IC, SI-3090CA
Q8240	23085821	IC, ADJ REG. VO=1.5V-16.0V BA7810T-V5
Q8250	23085377	IC, PQ5EV3J0000H
Q8251	23085600	IC, PST9129
Q8901	23205499	TRANSISTOR, KTC3198 Y/P
Q8902	23205499	TRANSISTOR, KTC3198 Y/P
Q8904	23205497	TRANSISTOR, KTA1266 Y/P
Q8911	23205499	TRANSISTOR, KTC3198 Y/P
Q8912	23205499	TRANSISTOR, KTC3198 Y/P
Q8930	23009998	IC, BA00JC5WT-V5
Q8940	23009998	IC, BA00JC5WT-V5
Q8950	23085503	IC, OPE AMP, TA75358P
QA81	23205329	TRANSISTOR, RN1404(F)
QA82	23205329	TRANSISTOR, RN1404(F)
QA83	23205329	TRANSISTOR, RN1404(F)
QA84	23205329	TRANSISTOR, RN1404(F)
QA85	23205329	TRANSISTOR, RN1404(F)
QA86	23205329	TRANSISTOR, RN1404(F)
QA87	23205329	TRANSISTOR, RN1404(F)
QA88	23205329	TRANSISTOR, RN1404(F)
QA91	23085674	IC, QT240-ISS-G-CA
QA92	23085674	IC, QT240-ISS-G-CA
QA93	23085731	IC, +4.2V 2% REG. SOT-23-5 R1121N421B-TR-FA
QA94	23085067	IC, R1121N331B-TR-FA
QB81	23205446	TRANSISTOR, 2SC2412K, Q T146
QB83	23085867	IC, DUAL COMPARATOR BA10393F-E2
QB84	23205446	TRANSISTOR, 2SC2412K, Q T146
QS01	23009916	IC, MM1631AJBE
QS02	23205506	TRANSISTOR, 2SC4081 Q
QS03	23205506	TRANSISTOR, 2SC4081 Q
QS04	23205506	TRANSISTOR, 2SC4081 Q
QS05	23205428	TRANSISTOR, KRA104S/P
QS06	23205424	TRANSISTOR, KTC2875B/P
QS07	23205424	TRANSISTOR, KTC2875B/P
QV01	23009940	IC, MM1630AQ
QV004	23205506	TRANSISTOR, 2SC4081 Q
QV005	23205506	TRANSISTOR, 2SC4081 Q
QV006	23205506	TRANSISTOR, 2SC4081 Q
QV007	23205506	TRANSISTOR, 2SC4081 Q
QV008	23205506	TRANSISTOR, 2SC4081 Q
QV009	23205305	TRANSISTOR, 2SC4667-O(F)
QV48	23205499	TRANSISTOR, KTC3198 Y/P
QV91	23205507	TRANSISTOR, 2SA1576A Q
QY100	23085570	IC, TC90A45F
QY101	23205506	TRANSISTOR, 2SC4081 Q
QY102	23205506	TRANSISTOR, 2SC4081 Q
QY103	23205507	TRANSISTOR, 2SA1576A Q
QY160	23205347	TRANSISTOR, KTC4075Y/P
QY501	23009929	IC, TA1383FG(DRY,EL)
QY502	23205305	TRANSISTOR, 2SC4667-O(F)
QY503	23205507	TRANSISTOR, 2SA1576A Q
QY504	23205507	TRANSISTOR, 2SA1576A Q
QY506	23205506	TRANSISTOR, 2SC4081 Q
QY507	23205506	TRANSISTOR, 2SC4081 Q

Location No.	Parts No.	Description
QY508	23205506	TRANSISTOR, 2SC4081 Q
QY509	23205506	TRANSISTOR, 2SC4081 Q
QY511	23205507	TRANSISTOR, 2SA1576A Q
QY512	23205507	TRANSISTOR, 2SA1576A Q
QY513	23205507	TRANSISTOR, 2SA1576A Q
QY514	23205507	TRANSISTOR, 2SA1576A Q
QY515	23205507	TRANSISTOR, 2SA1576A Q
QY516	23205507	TRANSISTOR, 2SA1576A Q
QY518	23205506	TRANSISTOR, 2SC4081 Q
QY522	23205506	TRANSISTOR, 2SC4081 Q
D601	23357703	DIODE, 1SS355
D602	23357703	DIODE, 1SS355
D603	23357703	DIODE, 1SS355
D604	23357703	DIODE, 1SS355
D605	23357703	DIODE, 1SS355
D606	23357703	DIODE, 1SS355
D607	23357703	DIODE, 1SS355
D608	23357703	DIODE, 1SS355
D609	23357703	DIODE, 1SS355
D611	23357703	DIODE, 1SS355
D612	23357703	DIODE, 1SS355
D613	23357703	DIODE, 1SS355
D614	23357703	DIODE, 1SS355
D615	23357703	DIODE, 1SS355
D616	23357703	DIODE, 1SS355
D617	23357703	DIODE, 1SS355
D628	23357771	DIODE, ZENER, MA8120-M
D801	23357712	DIODE, D5SB60, 4009 F05
D840	23362046	DIODE, LN1WBA60 4101
D841	23357838	DIODE, ZENER, MTZJ5.6C
D842	23357830	DIODE, ZENER, MTZJ4.7A
D843	23357366	DIODE, FR105-B5
D844	23357838	DIODE, ZENER, MTZJ5.6C
D845	23357697	DIODE, 1SS133
D846	23357684	DIODE, ZENER, RD3.0ESA B2
D847	23357684	DIODE, ZENER, RD3.0ESA B2
D848	23357697	DIODE, 1SS133
D849	23357697	DIODE, 1SS133
D850	23357622	DI0DE, ZENER, RD11ESA B3
D861	23357837	DIODE, ZENER, MTZJ5.6B
D863	23357697	DIODE, 1SS133
D864	23357366	DIODE, FR105-B5
D865	23357697	DIODE, 1SS133
D866	23357709	DIODE, RU1P
D867	23357900	DIODE, ZENER, MTZJ33B
D883	23357702	DIODE, FML-G12S
D884	23357366	DIODE, FR105-B5
D885	23357860	DIODE, RL2Z
D886	23357408	DIODE, FMX-12S(023-108)
D887	23357911	DIODE, FMB-26L
D888	23362113	DIODE, FML-G22S
D894	23357841	DIODE, ZENER, MTZJ6.8A
D895	23357841	DIODE, ZENER, MTZJ6.8A
D896	23357841	DIODE, ZENER, MTZJ6.8A
D897	23357841	DIODE, ZENER, MTZJ6.8A
D898	23357841	DIODE, ZENER, MTZJ6.8A
⚠ D899	76019485	VARISTOR, TNR10V431K
D8200	23357697	DIODE, 1SS133
D8210	23357519	DIODE, RK44,
D8211	23357831	DIODE, ZENER, MTZJ4.7B
D8902	23357697	DIODE, 1SS133
D8903	23357697	DIODE, 1SS133
D8904	23357838	DIODE, ZENER, MTZJ5.6C
D8905	23357838	DIODE, ZENER, MTZJ5.6C
D8911	23357838	DIODE, ZENER, MTZJ5.6C
D8912	23357838	DIODE, ZENER, MTZJ5.6C
D8913	23357838	DIODE, ZENER, MTZJ5.6C
D8914	23357697	DIODE, 1SS133
D8915	23357697	DIODE, 1SS133
D8922	23357639	DIODE, ZENER, RD5.6ESA B1
D8930	23357697	DIODE, 1SS133
D8931	23357697	DIODE, 1SS133
D8940	23357697	DIODE, 1SS133
D8941	23357697	DIODE, 1SS133
D8950	23357637	DIODE, ZENER, RD5.6ESA B3
D8951	23357637	DIODE, ZENER, RD5.6ESA B3

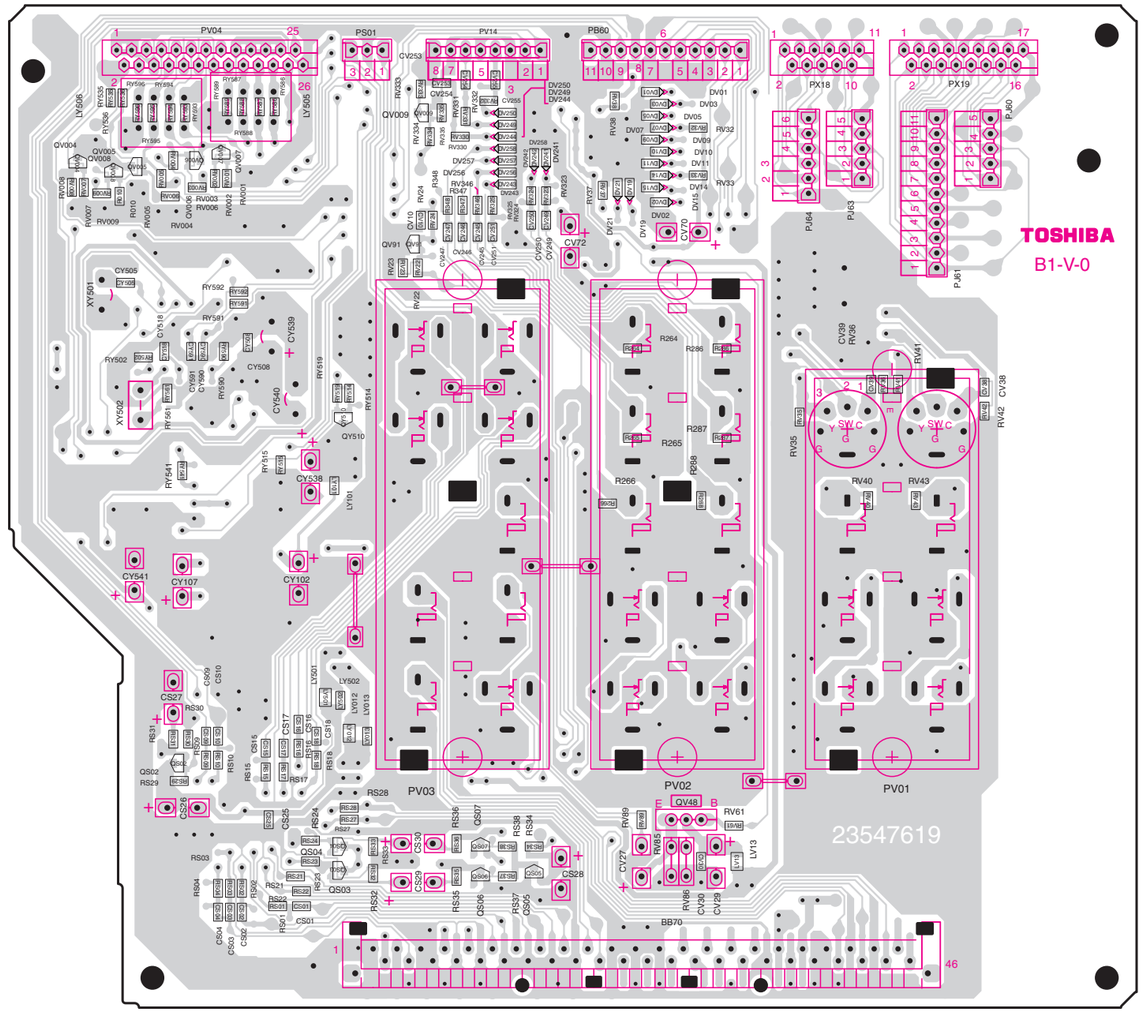
Location No.	Parts No.	Description
DA91	23357406	DIODE, ZENER, UDZS5.6B
DA92	23357406	DIODE, ZENER, UDZS5.6B
DB03	23358615	DIODE, LED INFRARED, SIR-56SB3F
DB81	23358584	DIODE, LED, SML-811UTT86
DB82	23358585	LED, LAMP, SML-810MTT86
DV07	23357751	DIODE, ZENER, MA8068-M
DV14	23357751	DIODE, ZENER, MA8068-M
KB01	23000852	REMOCON RECEIVER, PIC-37043TE2
MISCELLANEOUS		
A305	23717197	SCREW, THUMB SCREW
A306	23717198	SCREW, THUMB SCREW RETAINER
A516	23717192	SCREW, SCREW, AV BOARD
B112	23059129	PIECE COVER
B209	23738088	SCREW, BTBW3X12ECO
B214	23965241	TAPE, CC #12 10MM L30M
B215	23965241	TAPE, CC #12 10MM L30M
B231	23738088	SCREW, BTBW3X12ECO
B235	23845856	CLAMP, WIRE, POF COAT) L=70MM
BB10	23713014	PLUG, B-B 16P 1.5
BB11	23713013	SOCKET, B-B 16P 1.5
BB20	23713014	PLUG, B-B 16P 1.5
BB21	23713013	SOCKET, B-B 16P 1.5
BB70	23713810	PLUG , TAC-A46P-B1
BB71	23903245	SOCKET, B-B 46P, TAC-A46X-B1
⚠ F801	23144319	FUSE, CARTRIDGE, 125V 8A, 5.2X20
F801A	23165433	FUSE HOLDER, 5.2 SOC
⚠ F840	23144704	FUSE, AXIAL 125V 200MA
⚠ F860	23144714	FUSE, AXIAL 125V 4.0A
⚠ F880	23144714	FUSE, AXIAL 125V 4.0A
⚠ F881	23144706	FUSE, AXIAL 125V 500MA
⚠ F882	23144714	FUSE, AXIAL 125V 4.0A
⚠ F883	23144715	FUSE, AXIAL 125V 5.0A
⚠ F884	23144715	FUSE, AXIAL 125V 5.0A
⚠ F899	23144326	FUSE, CARTRIDGE, 250V 2A, 5.2X20
F899A	23165433	FUSE HOLDER, 5.2 SOC
⚠ F8210	23144709	FUSE, AXIAL 125V 1.5A
H002	23148378	IF MODULE, US BUFFER 6M TRAP, MVUS51A
H003	23124099	ANTENNA SWITCH, RSU135X1, 2I3O BUNPAI US
H003A	23747055	NUT, F-CONNECTOR 2H BS
J601A	23171400	WIRE, PVC, SOLDER-PLATED 300V 7/16 BRN UL CSA
JR001	23103239	INDUCTOR, BEAD, TEM2143AD
JR002	23103239	INDUCTOR, BEAD, TEM2143AD
MA01	23389271	CABLE, FFC P1.25-15-98
MV01	23368931	CABLE, MDR 26P 300MM 3M 79162-26M-030-011F
MV04	23389270	CABLE, FFC P1.25-26-140
MX18	23389272	CABLE, FFC P1.25-11-365
MX19	23389273	CABLE, FFC P1.25-17-410
P105	23713755	PLUG, 4P 2.5MM G, B4B-EH-F1-TV4
⚠ P800	23713702	PLUG, 2P 11.88MM W VT
⚠ P801	23372117	POWER CORD, U/C 125V10A HSV 5 CMC-02P 5
P805	23164965	CONNECTOR, PLUG 4P, W-P3504-#02
P811A	23713713	PLUG, 2P 3.96MM VH
P891	23713759	PLUG, 8P 2.5MM G, B8B-EH-F1-TV4
P892	23713764	PLUG, 13P
P901	23713754	PLUG, 3P 2.5MM G, B3B-EH-F1-TV4
P902A	23164563	CONNECTOR, PLUG 3P
P903	23713755	PLUG, 4P 2.5MM G, B4B-EH-F1-TV4
P906	23713761	PLUG, NP 2.5MM G, B10B-EH-F1A
P907	23713763	PLUG, NP 2.5MM G, B12B-EH-F1A
PA01	23713240	CONNECTOR, 15FE-BT-VK-N JST
PB22	23713755	PLUG, 4P 2.5MM G, B4B-EH-F1-TV4
PJ60	23713756	PLUG, 5P 2.5MM G, B5B-EH-F1-TV4
PJ61	23713762	PLUG, NP 2.5MM G, B11B-EH-F1A
PJ63	23713756	PLUG, 5P 2.5MM G, B5B-EH-F1-TV4
PJ64	23713757	PLUG, 6P 2.5MM G, B6B-EH-F1-TV4
PV01	23023311	JACK, PIN 2S6P, LAP5030-0111GC
PV02	23023205	JACK, PIN 10P SMK KARI2 @U103
	23023184	JACK, 1S3P, LAP5100-1502F @UV03
PV03	23023211	JACK, PIN 7P SMK KARI04
PV04	23713282	CONNECTOR, 26FE-ST-VK-N
PV13	23713760	PLUG, NP 2.5MM G, B9B-EH-F1A
PV14	23713781	PLUG, 8P 2.5MM W, S8B-EH
PX18	23713270	CONNECTOR, 11FE-ST-VK-N
PX19	23713110	CONNECTOR, FE-ST-VK-N 17P JST
Q825B	23738088	SCREW, BTBW3X12ECO

Location No.		Parts No.	Description
Q893B		23717241	SCREW, BITTB3X8ECO
Q894B		23717241	SCREW, BITTB3X8ECO
⚠ S810		23344522	SWITCH, SPVF11
⚠ SR81		23146588	RELAY, DLS5D1-O(M) 0.15W
⚠ SR82		23146584	RELAY, DC12V, TV5, DG-3
W661		23351244	SPEAKER, SPBOX(L) 8-OHM 20W SPK-1455AM
W662		23351245	SPEAKER, SPBOX(R) 8-OHM 20W SPK-1456AM
XY501		23153607	CRYSTAL, 3.58MHZ
XY502		23153721	CERAMIC RESONATOR, 503KHZ
PC BOARD ASSEMBLIES			
✻ U101		23764145	PC BOARD ASSY, IF AUDIO ACIN PU PD1775D
✻ U103		23764144	PC BOARD ASSY, BACK AV PU PD1774C
✻ U802		23764201	PC BOARD ASSY, MAIN POWER PU PD2128A-1
✻ UA02		23764202	PC BOARD ASSY, REMOTE SENS PU PD2128A-3
✻ UA03		23764203	PC BOARD ASSY, DOOR SW PU PD2128A-4
✻ UA06		23764199	PC BOARD ASSY, FRONT KEY, PD2072H
✻ UD02	#1	23148438	PC BOARD ASSY SCALER, B910PD2208A1
✻	#2	23148439	PC BOARD ASSY SCALER, B910PD2208B1
✻ UV02		23148418	HDMI MODULE, MHDM01A
✻ UV03		23764204	PC BOARD ASSY, FRONT AV PU PD2128A-2
TUNER			
⚠ H001		23321482	TUNER, US181CH IIC PH 5V PANA ELA52LX5
⚠ HY01		23321480	TUNER, TIF US IIC PH 181CH 5V ENG36A18GF
ACCESSORIES			
A701	#1	23067697	CARTON
	#2	23067698	CARTON
A703	#1	23946771	PACKING, TOP PACKING
	#2	23946772	PACKING, TOP PACKING
A708	#1	23946768	PACKING, BOTTOM PACKING
	#2	23946769	PACKING, BOTTOM PACKING
A709	#1	23067694	CARTON, BASE TRAY
	#2	23067695	CARTON, BASE TRAY
A710	#1	23946774	PACKING, SUPPORT POST
	#2	23946775	PACKING, SUPPORT POST
A721		23943628	PLYETHLENE COVERING 46GM88T
⚠ K912		23306617	REMOCON HAND UNIT IR, CTVUSA CT-90159
⚠ Y101E		23566609	OWNERS MANUAL, ENGLISH
⚠ Y101F		23566610	OWNERS MANUAL, FRENCH
Y102		23589650	SHEET, IMPORTANT NOTES
CABINET PARTS			
⚠ A025		23532769	COVER, LAMP TUNNEL PURCHASE ASY
⚠ A026		23428292	DOOR, DOOR LAMP PURCHASE ASSY
⚠ A101		23533280	COVER, BASE PURCHASE ASSEY
⚠ A201	#1	23533355	COVER, BEZEL PURCHASE ASSY
⚠	#2	23533345	COVER, BEZEL PURCHASE ASM
A204	#1	23532684	COVER, BACK COVER
	#2	23532763	COVER, BACK COVER
⚠ A205	#1	23532782	COVER, BACKCOVER PURCHASE ASSY
⚠	#2	23532784	COVER, BACKCOVER PURCHASE ASSY
A215		23940083	PIECE, PIECE ENCLOSURE,DLE
A220		23451976	PUSH CATCH, CLICK
⚠ A222	#1	23532770	COVER, PEDESTAL PURCHASE ASSY
⚠	#2	23532885	COVER, PEDESTAL ASSY
A225		23940084	PIECE, STRIKER
A227	#1	23433349	DECORATIVE, CTRL PANEL TRIM
	#2	23433348	DECORATIVE, CTRL PANEL TRIM
A231	#2	23940100	PIECE, PIECE SIDE RIGHT
A232	#2	23940099	PIECE, PIECE SIDE LEFT
⚠ A271	#1	23405474	OPTICAL ENGINE, LV-672 TB 0B
⚠	#2	23405476	OPTICAL ENGINE, LV-672 TB 0D
A278		23084267	BRACKET, SPEED CLIP
A333		23940463	PIECE, AV MOUNT PURCHASE ASY
⚠ A401		23533281	COVER, REAR COVER PURCHASE
A421		23532738	COVER, REAR COVER,DLE
A422		23084729	VENT, REAR DLE
E998Z		23311153	EXCHANGE LAMP, PJ-D95-LMP
K501	#1	23311133	SCREEN, 52K5M LENTICULAR SHEET
	#2	23311137	SCREEN, 62K5M LENTICULAR SHEET
K502	#1	23311072	SCREEN, 52K4M FRESNEL SHEET
	#2	23311081	SCREEN, 62K4MF FRESNEL SHEET
K601	#1	23405453	MIRROR, 52G4M3
	#2	23405455	MIRROR, 62G4M3

Location No.	Parts No.	Description
SK01	23587525	SERVICE KIT, LAMP FAN
SK02	23587526	SERVICE KIT, DMD FAN
SK03	23587527	SERVICE KIT, BALLAST FAN
SK04	23587528	SERVICE KIT, THERMOSTAT
SK06	23587536	SERVICE KIT, B TO F CABLE
SK08	23587538	SERVICE KIT, S TO F CABLE
SK09	23587539	SERVICE KIT, FAN TRANSFER CABLE

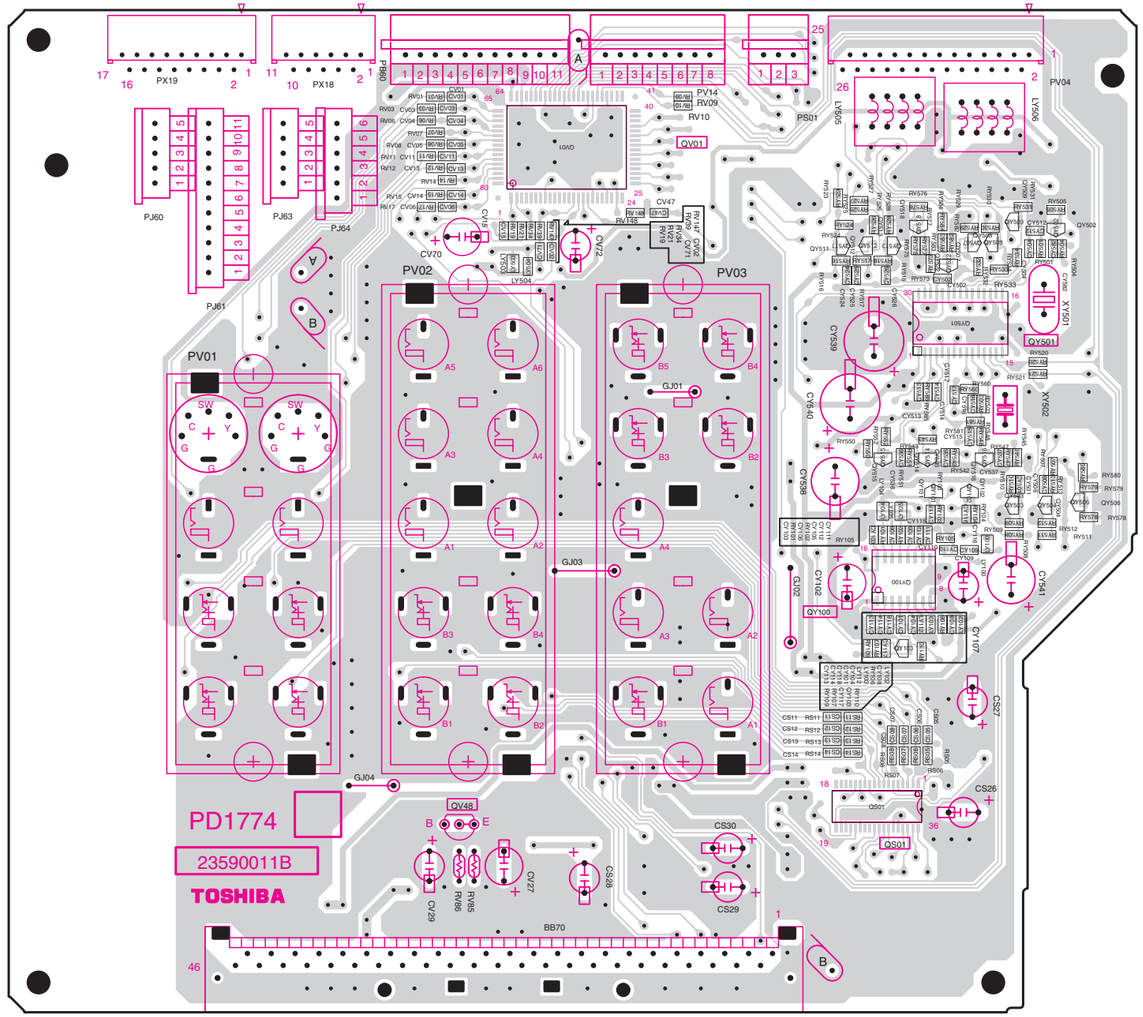
BACK AV BOARD PD1774C (U103)

BOTTOM (FOIL) SIDE



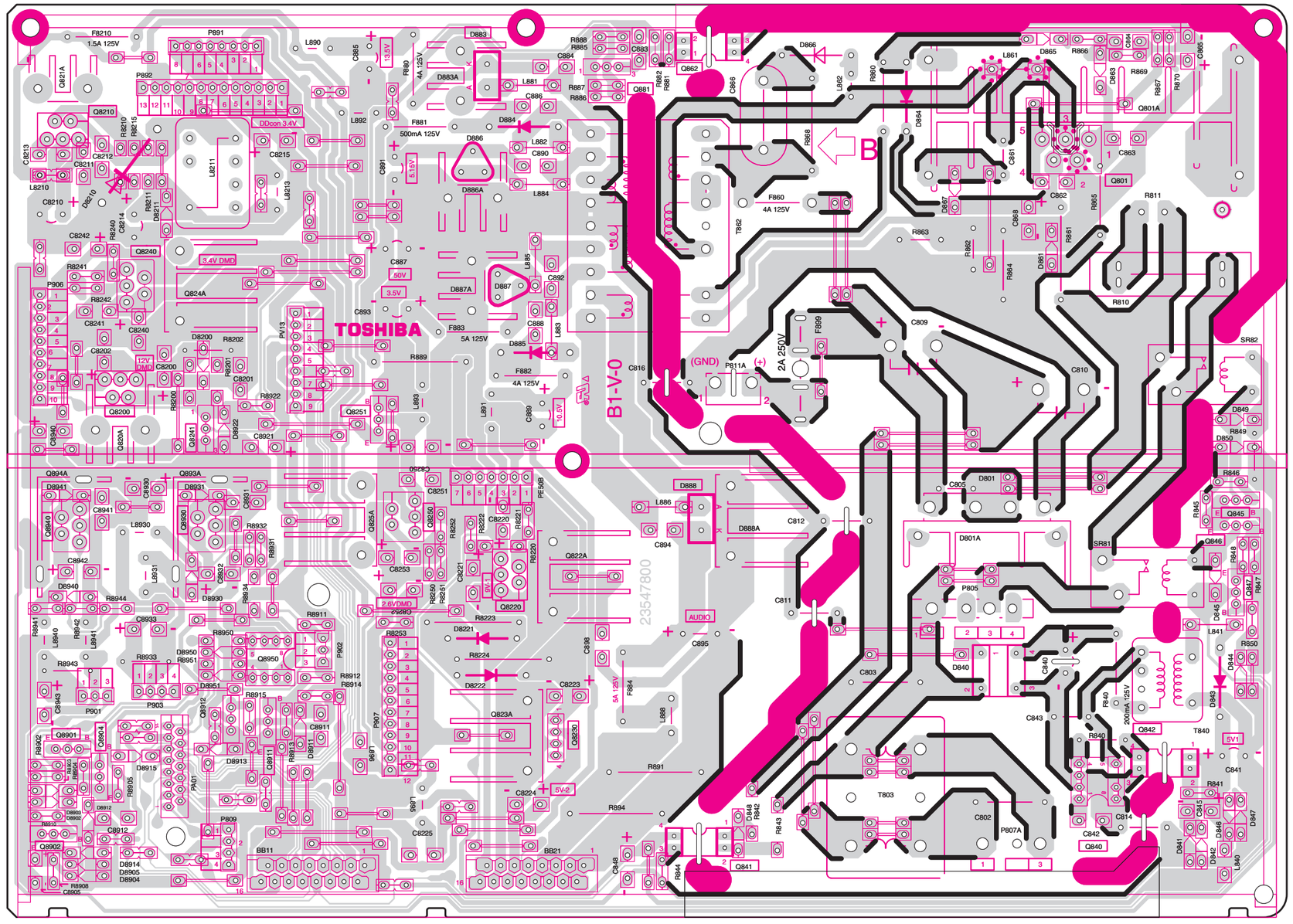
BACK AV BOARD PD1774C (U103)

TOP (COMPONENT) SIDE



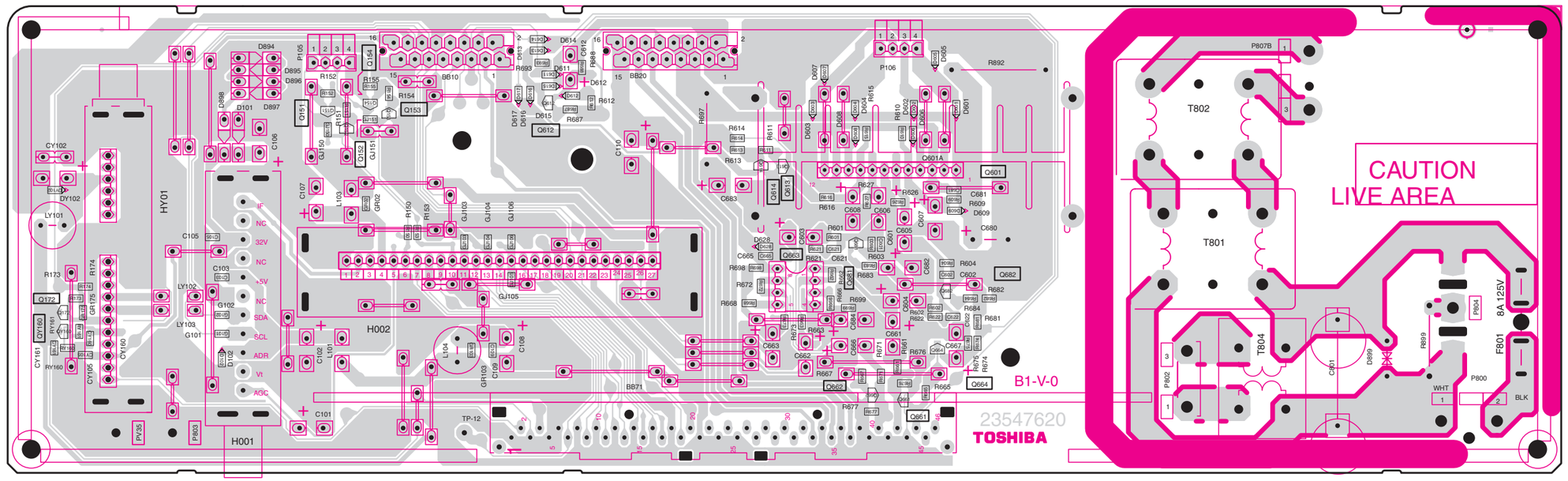
MAIN POWER BOARD PD2128A-1 (U802)

BOTTOM (FOIL) SIDE



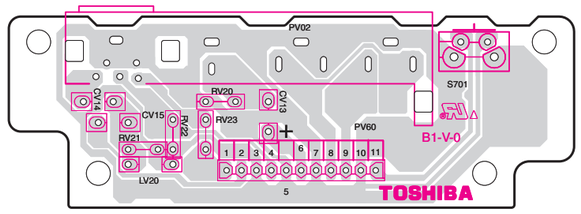
IF AUDIO BOARD PD1775D (U101)

BOTTOM (FOIL) SIDE



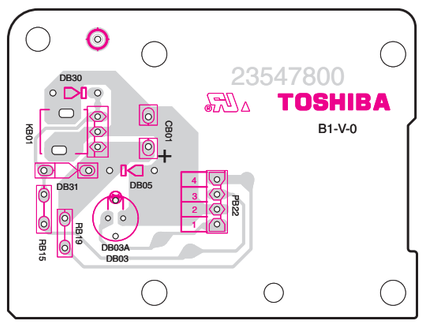
FRONT AV BOARD PD2128A-2 (UV03)

BOTTOM (FOIL) SIDE



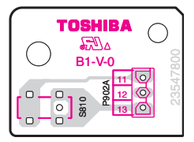
REMOTE SENSOR BOARD PD2128A-3 (UA02)

BOTTOM (FOIL) SIDE



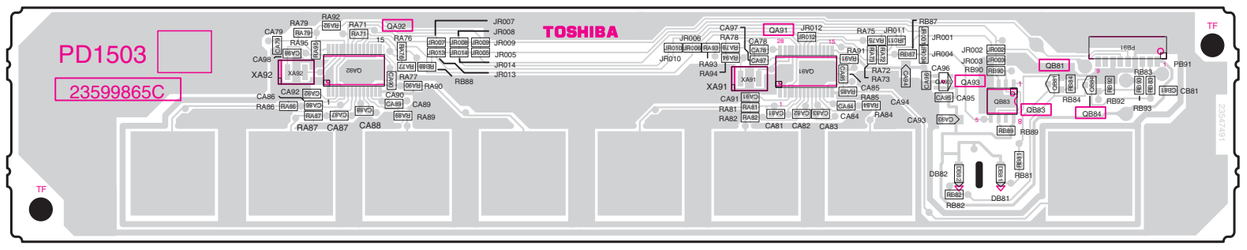
DOOR SWITCH BOARD PD2128A-4 (UA03)

BOTTOM (FOIL) SIDE



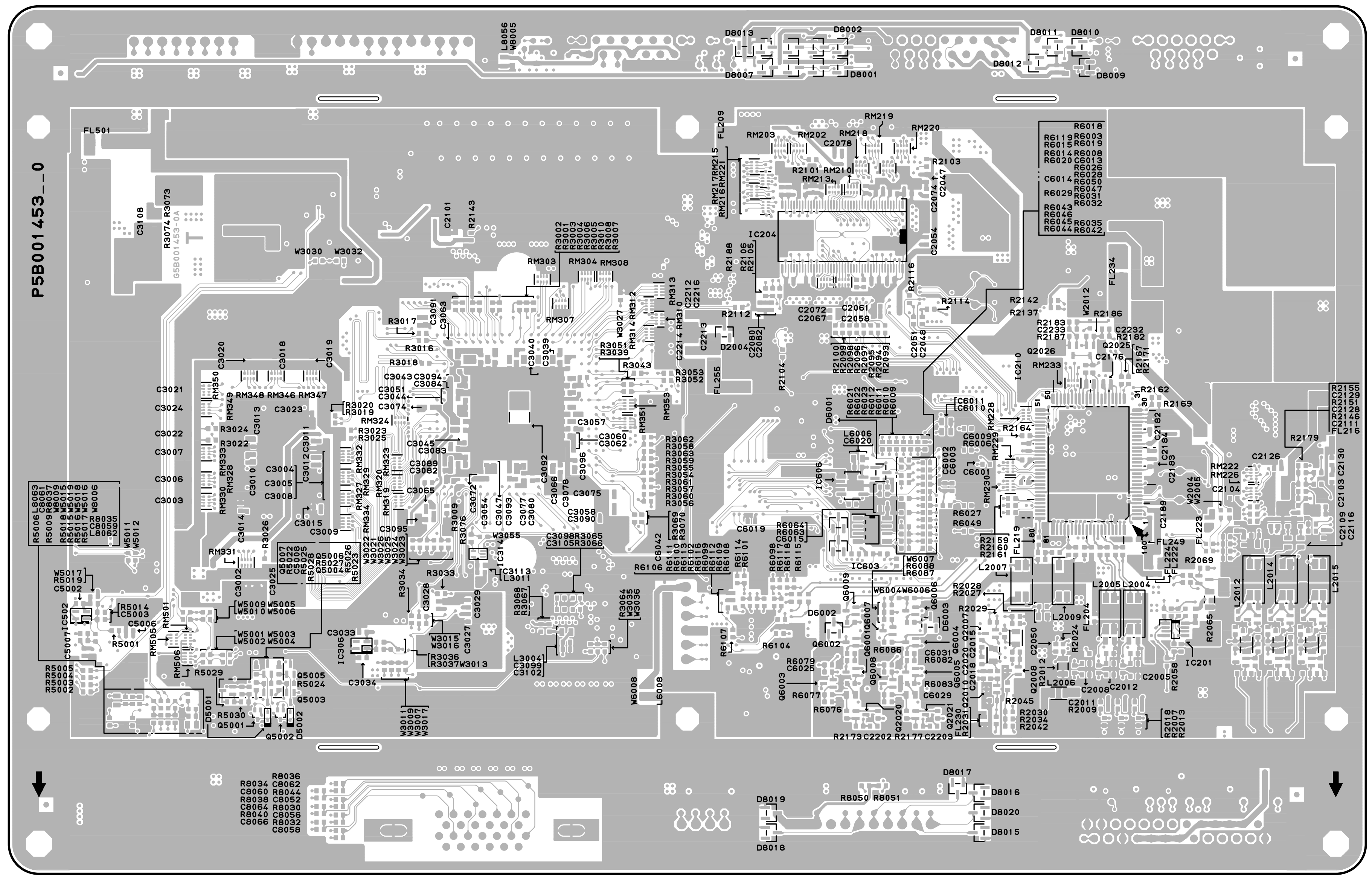
FRONT KEY BOARD PD2072H (UA06)

TOP (COMPONENT) SIDE



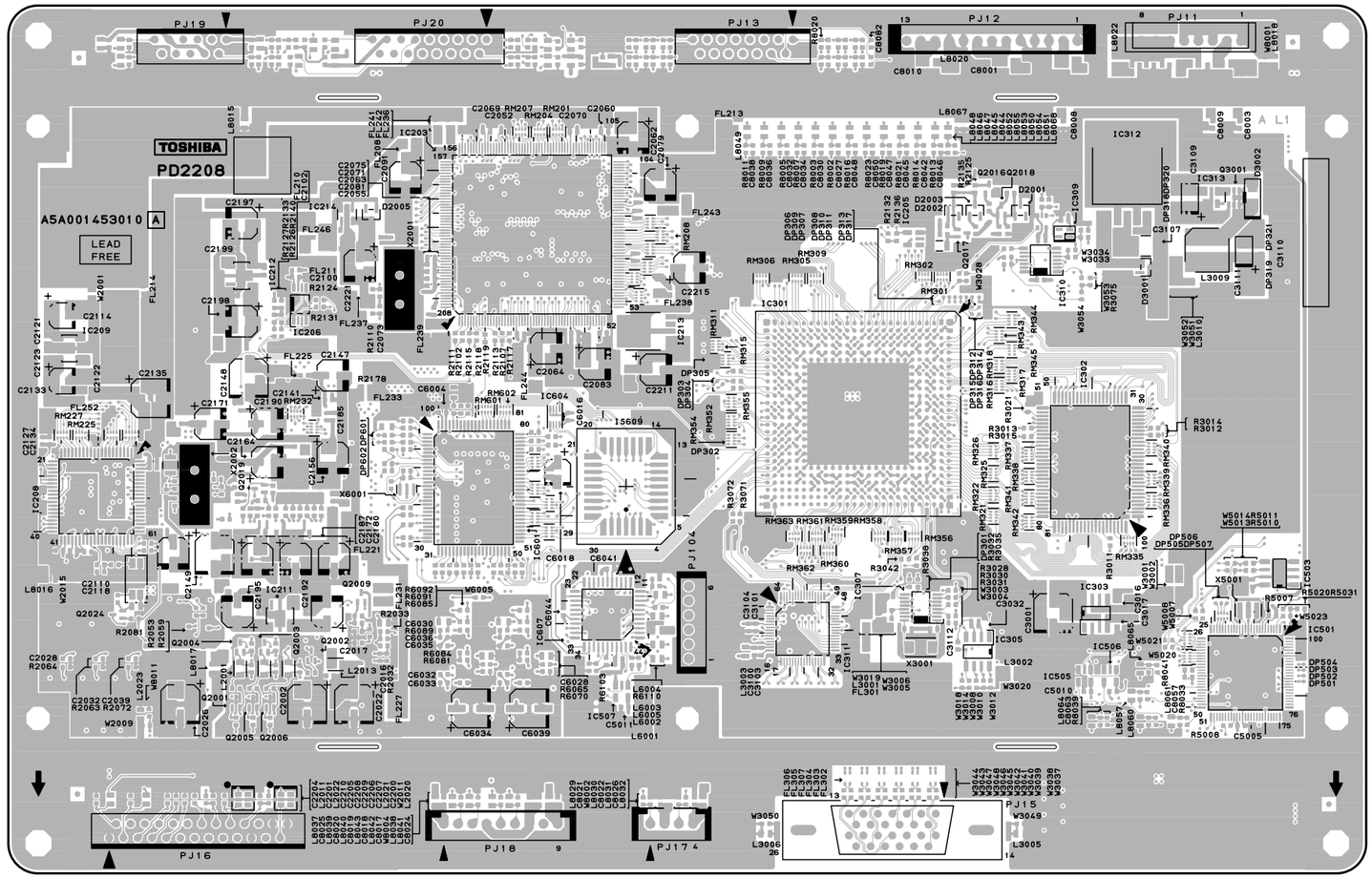
SCALER BOARD PD2208A1 (52HM85) (UD02)
SCALER BOARD PD2208B1 (62HM85) (UD02)

BOTTOM (FOIL) SIDE



SCALER BOARD PD2208A1 (52HM85) (UD02)
SCALER BOARD PD2208B1 (62HM85) (UD02)

TOP (COMPONENT) SIDE


TOSHIBA
PD2208
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PJ12
PJ11
PJ16
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PJ174
PJ104
PJ15
IC312
IC313
IC301
IC303
IC305
IC506
IC505
IC501
IC507
X5001
X3001
X2001
X2002
Q3001
Q2016
Q2018
Q2017
Q2009
Q2024
Q2004
Q2002
Q2001
Q2005
Q2006
D2001
D2003
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C2250
C2251
C2252
C2253
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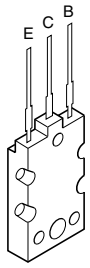
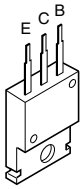
C2259
C2260

TERMINAL VIEW OF TRANSISTORS

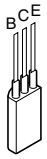
① 2SC5144
2SC5859



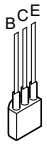
② 2SC3852
2SD1763A
2SC1569
2SC4544
2SA1788
2SA1306
2SA1186A



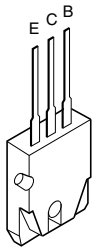
③ 2SC752GTM
2SC2482
2SC2655
2SC4721P



④ 2SC752
2SA562TM
2SA1015
2SC1815
2SC2878
2SC1740S
2SC2120
2SA9335



⑤ 2SA1788



⑥ RN2203
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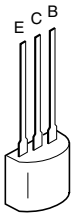
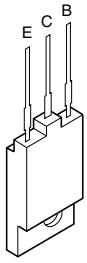
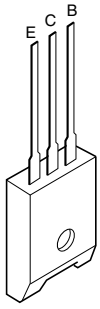
RN2004
RN1203
RN1204
RN2204
RN1205
RN1202
RN1201



⑦ 2SD1554
2SD2253
2SD1556
2SD2553
2SC5143



⑧ ON4409



SCHEMATIC DIAGRAM

MODEL : 52HM85/62HM85

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

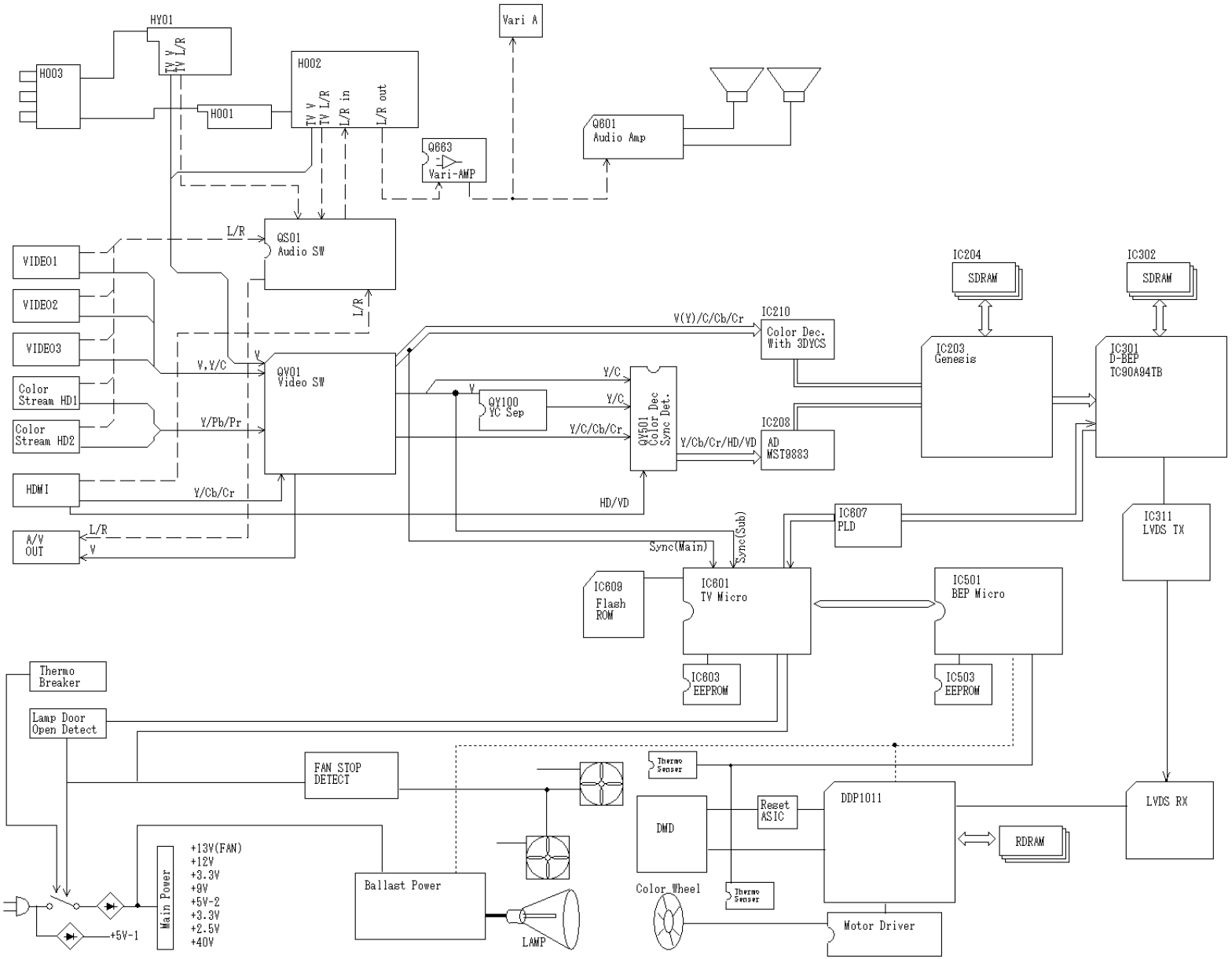
NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
   1/2R = Metal or Metal oxide of 1/2 watt 1/2S = Carbon compsistion of 1/2 watt
   1RF = Fuse resistor of 1 watt 10W = Cement of 10 watt
   K = ±10% G = ±2% F = ±1%
2. CAPACITOR Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in F, and the values more than 1 in pF.
   All capacitors are ceramic 50V, unless otherwise noted as the following marks.
   Electolytic capacitor Mylar capacitor
3. The parts indicated with "⚠" have special characteristics, and should be replaced with identical parts only.
4. Voltages read with DIGITAL MULTI-METER from point indicated to chassing ground, using a color bar signal with all controls at normal, line voltage at 220 volts.
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary ±20% except H.V.

■ **SCHEMA TIC DIAGRAM STRUCTURE:**

- BACK AV Circuit
  - (1/5) [SHEET - 1/5] 1/52
  - (2/5) [SHEET - 2/5] 2/52
  - (3/5) [SHEET - 3/5] 3/52
  - (4/5) [SHEET - 4/5] 4/52
  - (5/5) [SHEET - 5/5] 5/52
- IF AUDIO Circuit
  - (1/3) [SHEET - 1/3] 6/12
  - (2/3) [SHEET - 2/3] 7/52
  - (3/3) [SHEET - 3/3] 8/52
- F-AV Circuit 9/52
- AV_CONNECTOR Circuit 10/52
- AD_LPF Circuit 11/52
- DVCD2_LPF Circuit 12/52
- DVCD1_LPF Circuit 13/52
- 3chADC HD Circuit 14/52
- 3chADC MST9883 Circuit 15/52
- DVCD CSYNCIN Circuit 16/52
- DVCD TC90A92AFG Circuit 17/52
- DVCD POWER Circuit 18/52
- GENESIS Circuit
  - (1/2) [SHEET - 1/2] 19/52
  - (2/2) [SHEET - 2/2] 20/52
- SDRAM Circuit 21/52
- GENESIS_POWER Circuit 22/52
- GENESIS_IIC Circuit 23/52
- SCALER DIGITAL INPUT Circuit 24/52
- SCALER CAPTURE INPUT Circuit 25/52
- DDR SDRAM Circuit 26/52
- SCALER PLL Circuit 27/52
- OSD for North America Circuit 28/52
- IIC Circuit 29/52
- 94TB POWER Circuit 30/52
- LVDS OUT Circuit 31/52
- Power (3.3V_2 to 2.5V_DVCC) Circuit 32/52
- LVDS OUT CONNECTOR Circuit 33/52
- DC/DC CONVERTER Circuit 34/52
- SUB MICON Circuit
  - (1/3) [SHEET - 1/3] 35/52
  - (2/3) [SHEET - 2/3] 36/52
  - (3/3) [SHEET - 3/3] 37/52
- OSD MICON 4/4 Circuit 38/52
- MICON Circuit
  - (1/3) [SHEET - 1/3] 39/52
  - (2/3) [SHEET - 2/3] 40/52
  - (2/3) [SHEET - 3/3] 41/52
- TV MICON RESET IC & FLASH Circuit 42/52
- SYNC_DETECT Circuit 43/52
- PLD (US OSD SYNC Generator) Circuit 44/52
- POWER_CONNECTOR Circuit 45/52
- TV MICON CONNECTOR (1) Circuit 46/52
- CONNECTOR (TV MICON-POWER BOARD) Circuit 47/52
- CONNECTOR (DLF I/F) Circuit 48/52
- SERVICE CONNECTOR Circuit 49/52
- Front Key Circuit 50/52
- MAIN POWER Circuit 51/52
- AC IN Circuit 52/52

CIRCUIT BLOCK DIAGRAM



TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN

TOSHIBA

FILE NO. 020-200506

CIRCUIT DIAGRAMS

Projection Television

52HM85
62HM85

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DOCUMENT CREATED IN JAPAN, June, 2005

SCHEMATIC DIAGRAM

MODEL : 52HM85/62HM85

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

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   1/2S = Carbon compsistion of 1/2 watt
   1RF = Fuse resistor of 1 watt
   10W = Cement of 10 watt
   K = ±10% G = ±2% F = ±1%
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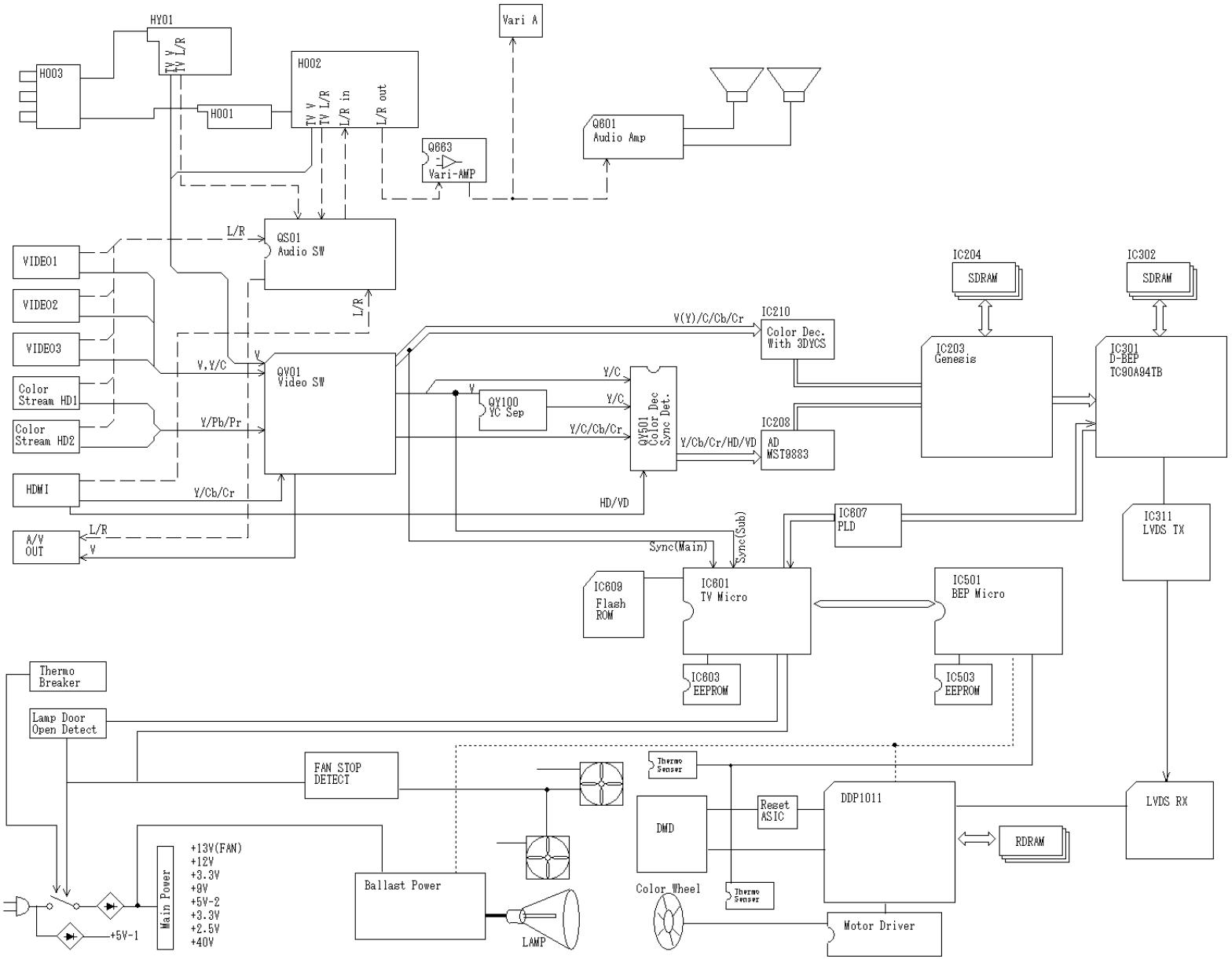
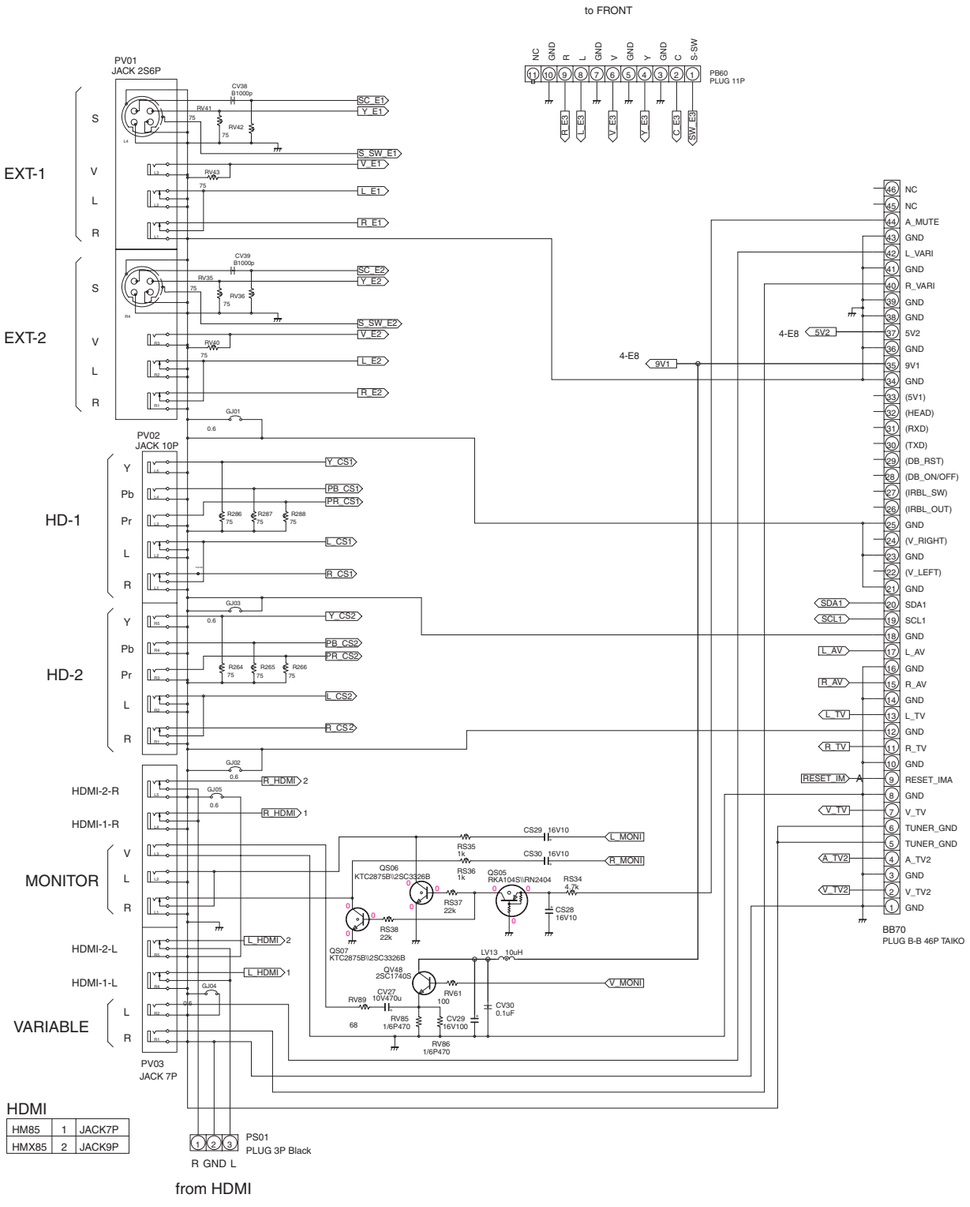
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary ±20% except H.V.

■ SCHEMA TIC DIAGRAM STRUCTURE:

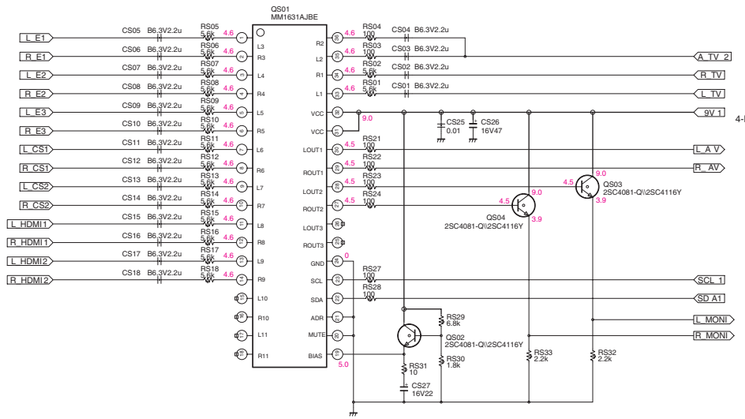
- BACK AV Circuit
  - (1/5) [SHEET - 1/5] 1/52
  - (2/5) [SHEET - 2/5] 2/52
  - (3/5) [SHEET - 3/5] 3/52
  - (4/5) [SHEET - 4/5] 4/52
  - (5/5) [SHEET - 5/5] 5/52
- IF AUDIO Circuit
  - (1/3) [SHEET - 1/3] 6/12
  - (2/3) [SHEET - 2/3] 7/52
  - (3/3) [SHEET - 3/3] 8/52
- F-AV Circuit 9/52
- AV_CONNECTOR Circuit 10/52
- AD_LPF Circuit 11/52
- DVCD2_LPF Circuit 12/52
- DVCD1_LPF Circuit 13/52
- 3chADC HD Circuit 14/52
- 3chADC MST9883 Circuit 15/52
- DVCD CSYNCIN Circuit 16/52
- DVCD TC90A92AFG Circuit 17/52
- DVCD POWER Circuit 18/52
- GENESIS Circuit
  - (1/2) [SHEET - 1/2] 19/52
  - (2/2) [SHEET - 2/2] 20/52
- SDRAM Circuit 21/52
- GENESIS_POWER Circuit 22/52
- GENESIS_IIC Circuit 23/52
- SCALER DIGITAL INPUT Circuit 24/52
- SCALER CAPTURE INPUT Circuit 25/52
- DDR SDRAM Circuit 26/52
- SCALER PLL Circuit 27/52
- OSD for North America Circuit 28/52
- IIC Circuit 29/52
- 94TB POWER Circuit 30/52
- LVDS OUT Circuit 31/52
- Power (3.3V_2 to 2.5V_DVCC) Circuit 32/52
- LVDS OUT CONNECTOR Circuit 33/52
- DC/DC CONVERTER Circuit 34/52
- SUB MICON Circuit
  - (1/3) [SHEET - 1/3] 35/52
  - (2/3) [SHEET - 2/3] 36/52
  - (3/3) [SHEET - 3/3] 37/52
- OSD MICON 4/4 Circuit 38/52
- MICON Circuit
  - (1/3) [SHEET - 1/3] 39/52
  - (2/3) [SHEET - 2/3] 40/52
  - (2/3) [SHEET - 3/3] 41/52
- TV MICON RESET IC & FLASH Circuit 42/52
- SYNC_DETECT Circuit 43/52
- PLD (US OSD SYNC Generator) Circuit 44/52
- POWER_CONNECTOR Circuit 45/52
- TV MICON CONNECTOR (1) Circuit 46/52
- CONNECTOR (TV MICON-POWER BOARD) Circuit 47/52
- CONNECTOR (DLF I/F) Circuit 48/52
- SERVICE CONNECTOR Circuit 49/52
- Front Key Circuit 50/52
- MAIN POWER Circuit 51/52
- AC IN Circuit 52/52

CIRCUIT BLOCK DIAGRAM

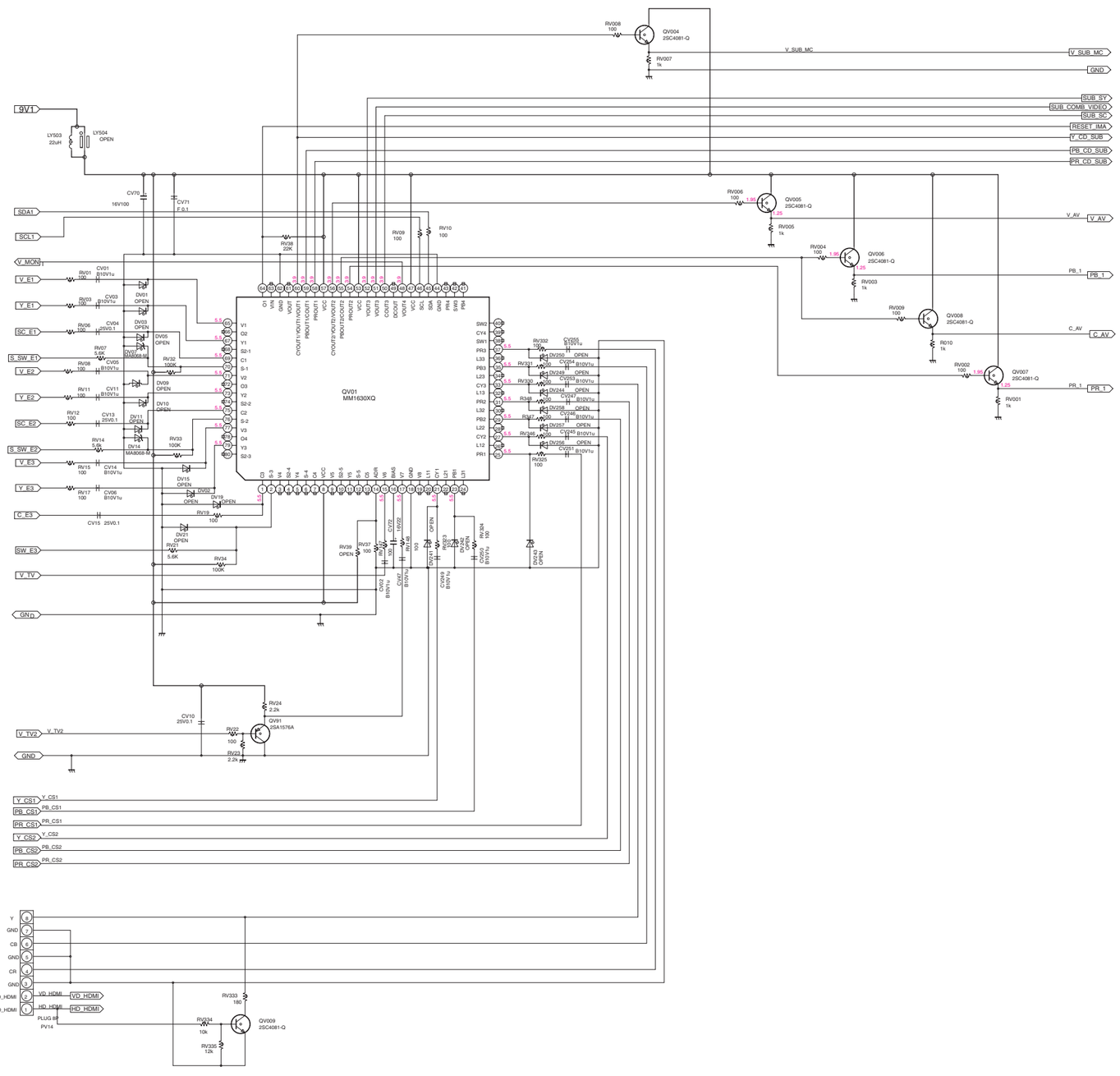



to FRONT
NC GND R L GND V GND Y GND C S-SW
PB60 PLUG 11P
R_E3 L_E3 V_E3 Y_E3 C_E3 SW_E3
PV01 JACK 2S6P
EXT-1
EXT-2
S V L R
SC_E1 Y_E1 S_SW_E1 V_E1 L_E1 R_E1
SC_E2 Y_E2 S_SW_E2 V_E2 L_E2 R_E2
CV38 B1000p
CV39 B1000p
RV41 RV42 RV43 RV35 RV36 RV60
GJ01
PV02 JACK 10P
HD-1
HD-2
Y Pb Pr L R
Y_CS1 PB_CS1 PR_CS1 L_CS1 R_CS1
Y_CS2 PB_CS2 PR_CS2 L_CS2 R_CS2
R286 R287 R288 R264 R265 R266
GJ03
GJ02
GJ05
GJ04
PV03 JACK 7P
HDMI-2-R HDMI-1-R MONITOR HDMI-2-L HDMI-1-L VARIABLE
R_HDMI 2 R_HDMI 1 L_HDMI 2 L_HDMI 1
HDMI
HM85 1 JACK7P
HMX85 2 JACK9P
PS01 PLUG 3P Black
R GND L
from HDMI
CS29 16V10 CS30 16V10
RS35 1k RS36 1k RS37 22k RS38 22k RS34 4.7k
CS28 16V10
QS06 KTC2875B\2SC3326B
QS05 RKA104S\RN2404
QS07 KTC2875B\2SC3326B
QV48 2SC1740S
LV13 10uH
CV27 10V470u
RV89 68
RV85 1/6P470
CV29 16V100
CV30 0.1uF
RV61 100
RV86 1/6P470
L_MONI R_MONI V_MONI
4-E8 9V1
4-E8 5V2
NC NC A_MUTE GND L_VARI GND R_VARI GND GND 5V2 GND 9V1 GND (5V1) (HEAD) (RXD) (TXD) (DB_RST) (DB_ON/OFF) (IRBL_SW) (IRBL_OUT) GND (V_RIGHT) GND (V_LEFT) GND SDA1 SCL1 GND L_AV GND R_AV GND L_TV GND R_TV GND RESET_IMA GND V_TV TUNER_GND TUNER_GND A_TV2 GND V_TV2 GND
SDA1 SCL1 L_AV R_AV L_TV R_TV RESET_IMA V_TV A_TV2 V_TV2
BB70
PLUG B-B 46P TAIKO

52HM85/62HM85
BACK AV (1/5)
SHEET-1/5

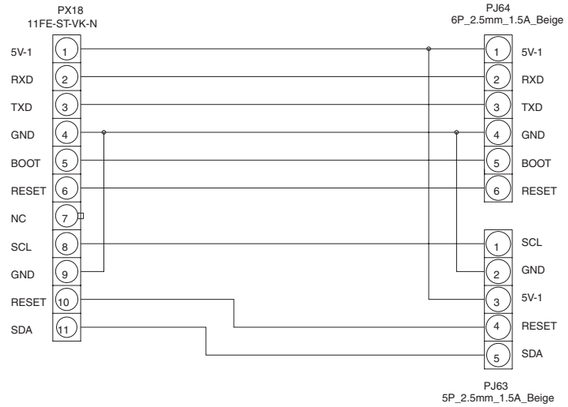


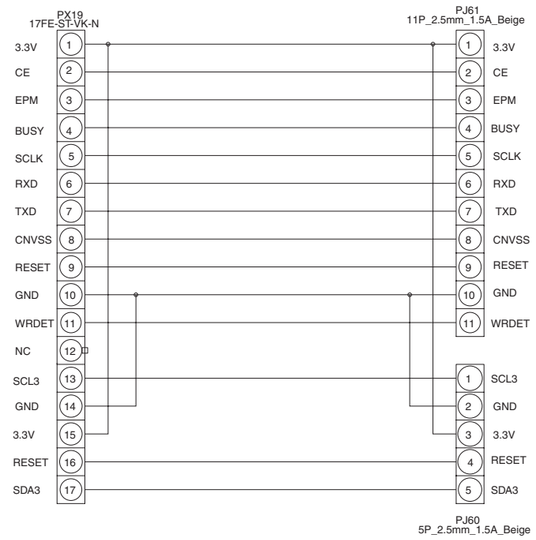
52HM85/62HM85
BACK AV (2/5)
SHEET-2/5



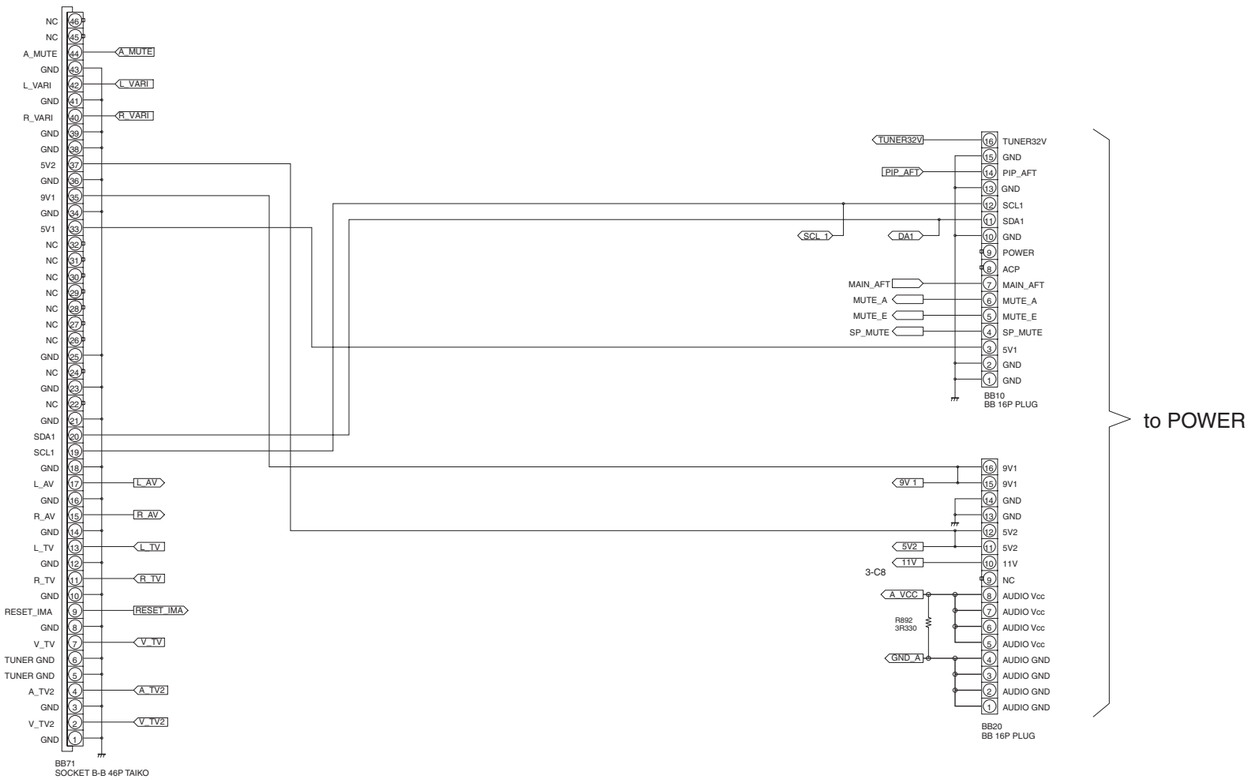
52HM85/62HM85
BACK AV (3/5)
SHEET-3/5

52HM85/62HM85
BACK AV (4/5)
SHEET-4/5

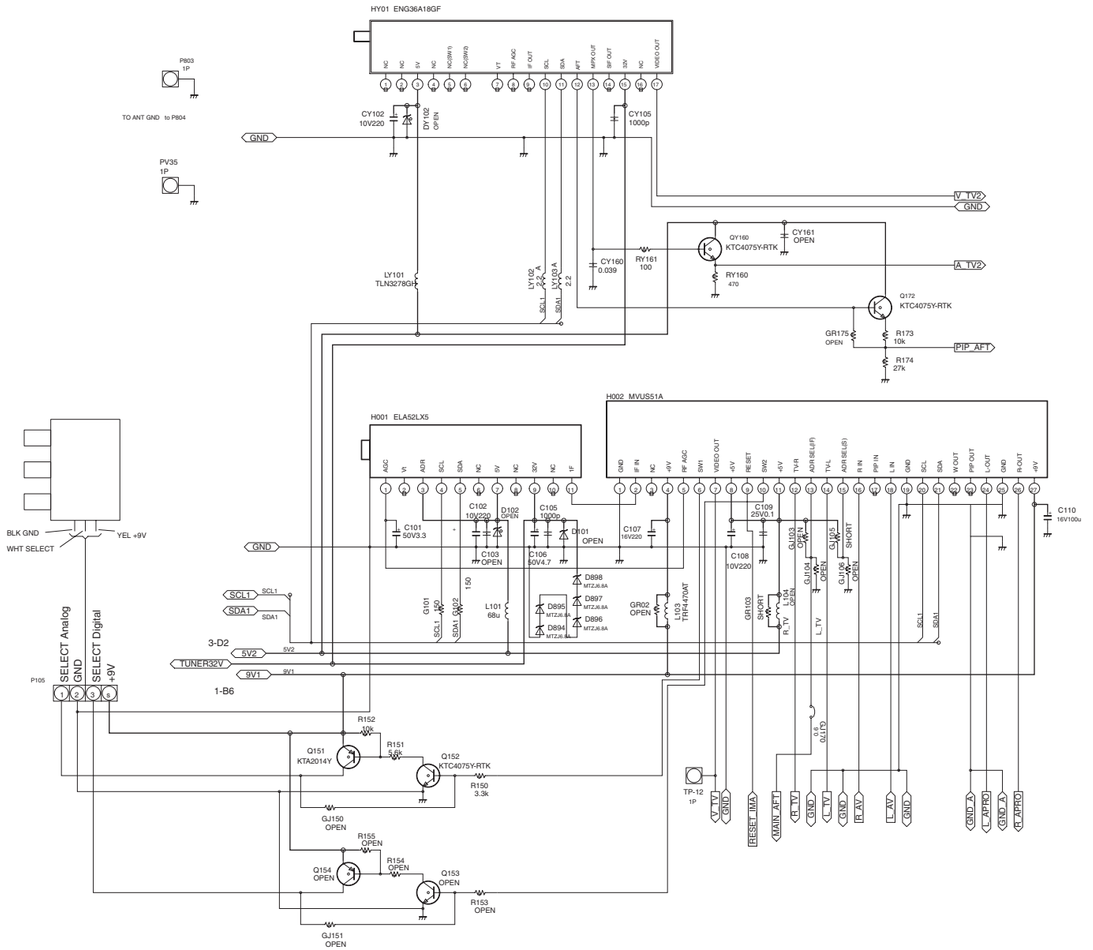




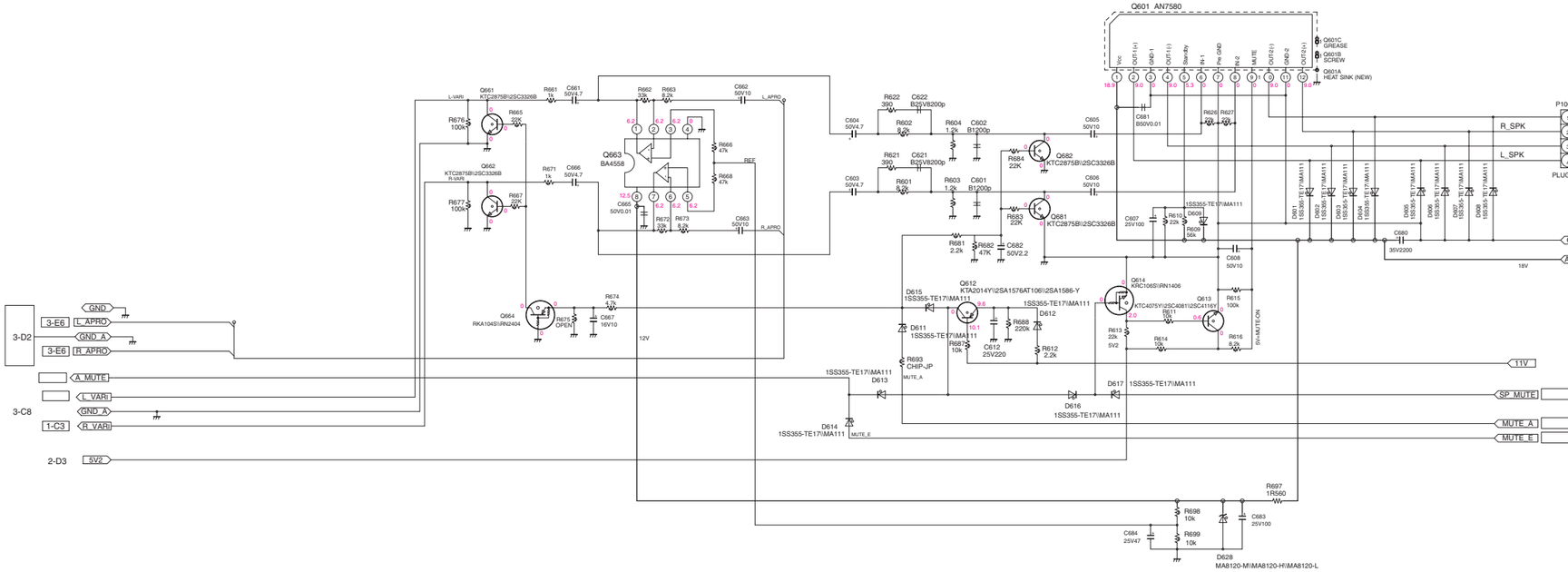
52HM85/62HM85
BACK AV (5/5)
SHEET-5/5



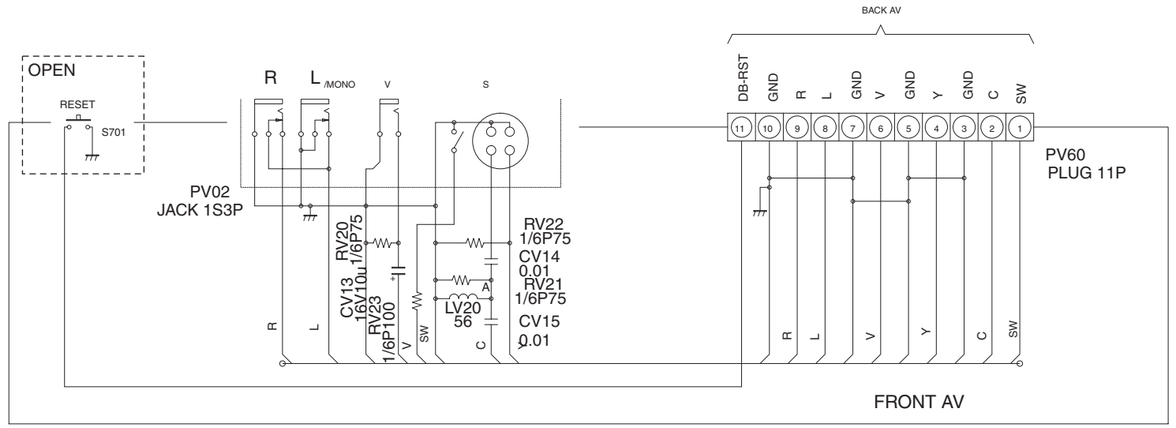
52HM85/62HM85
IF AUDIO (1/3)
SHEET-1/3

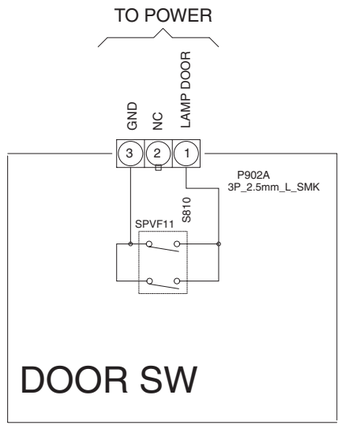


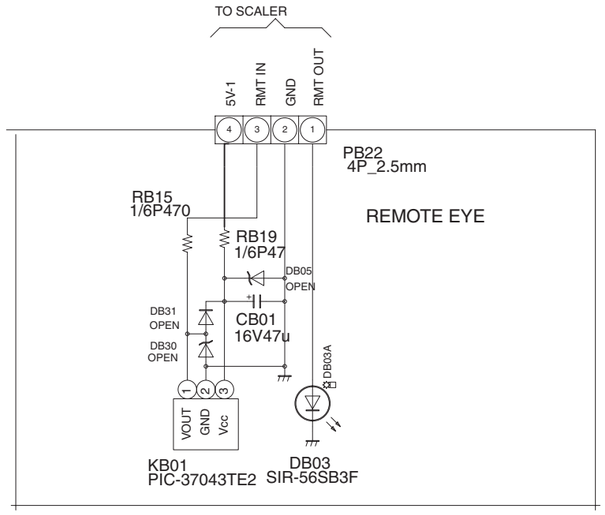
52HM85/62HM85
IF AUDIO (2/3)
SHEET-2/3



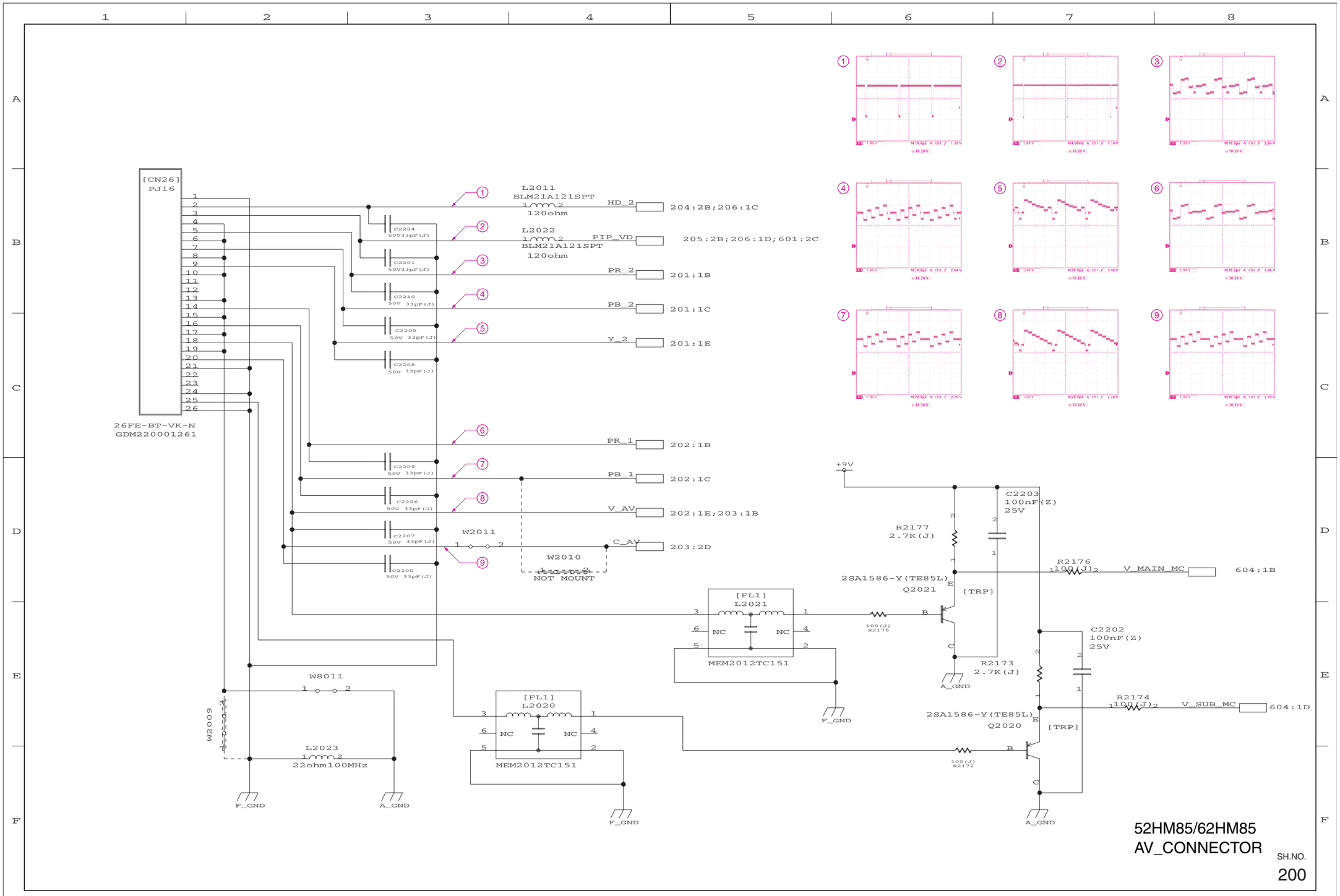
52HM85/62HM85
IF AUDIO (3/3)
SHEET-3/3

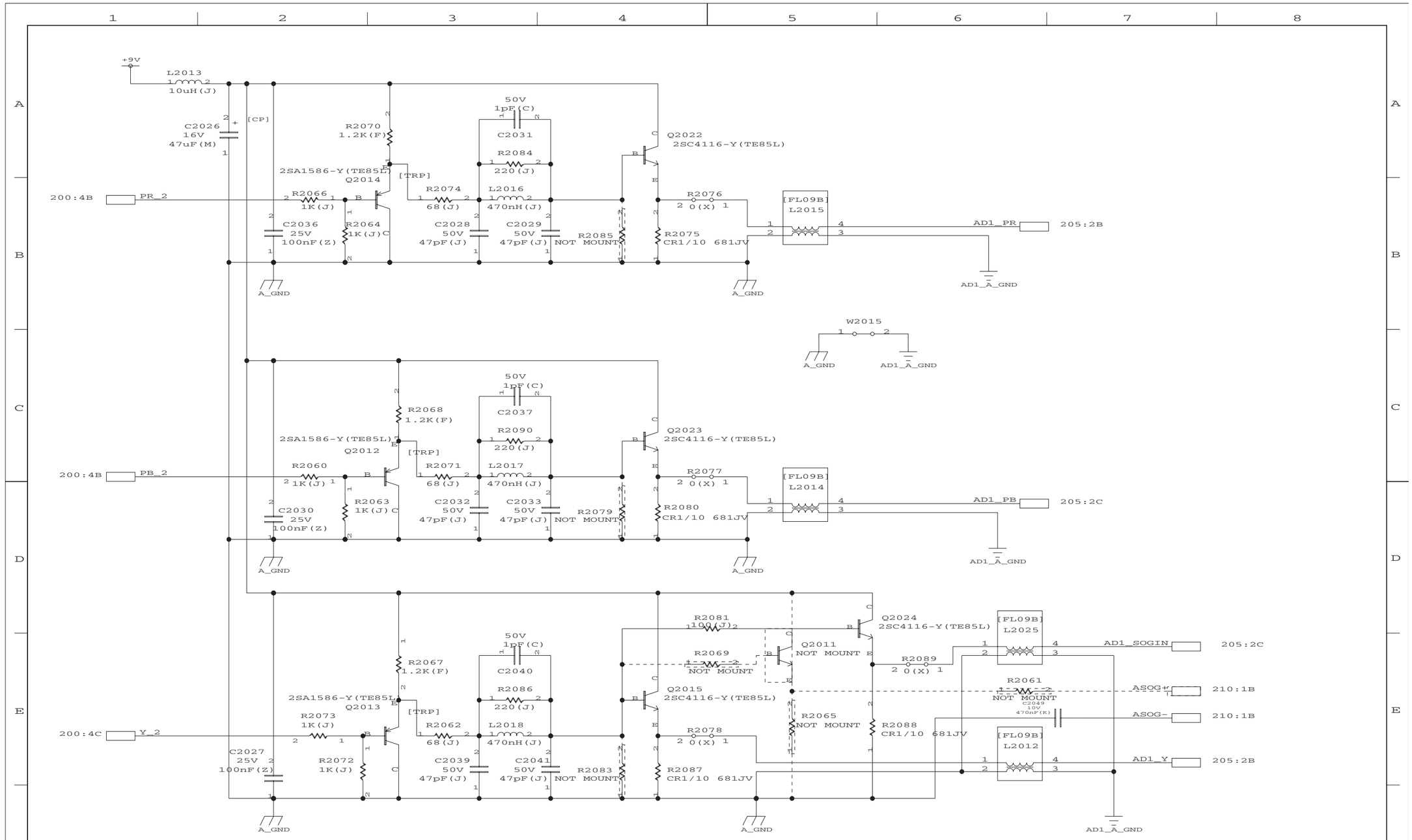






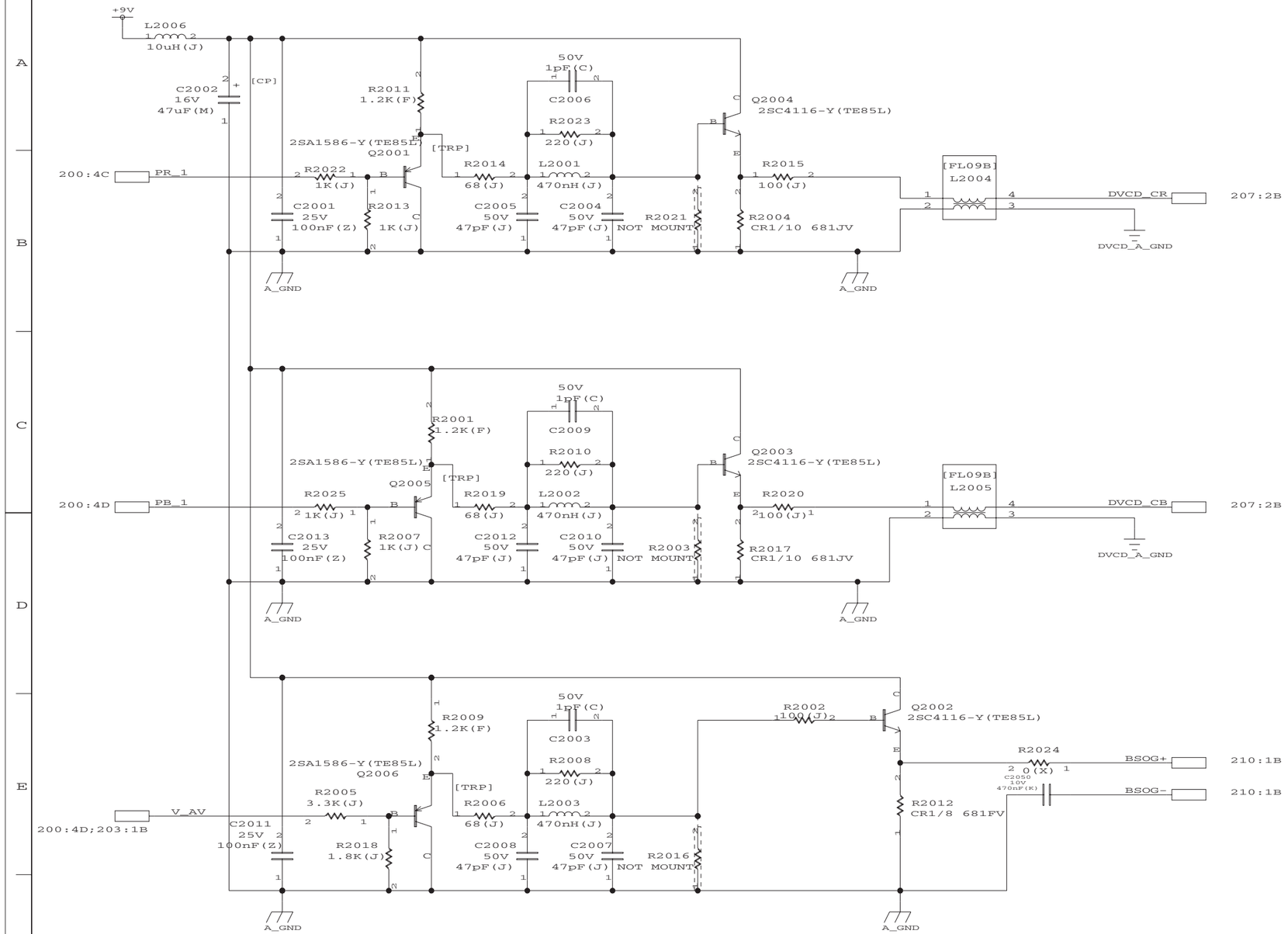
52HM85/62HM85
F-AV


[CN26]
PJ16
26FE-BT-VK-N
GDM220001261
L2011
BLM21A121SPT
120ohm
L2022
BLM21A121SPT
120ohm
HD_2
204:2B;206:1C
PIP_VD
205:2B;206:1D;601:2C
PR_2
201:1B
PB_2
201:1C
Y_2
201:1E
PR_1
202:1B
PB_1
202:1C
V_AV
202:1E;203:1B
C_AV
203:2D
C2204 50V33pF(J)
C2201 50V33pF(J)
C2210 50V 33pF(J)
C2205 50V 33pF(J)
C2208 50V 33pF(J)
C2209 50V 33pF(J)
C2206 50V 33pF(J)
C2207 50V 33pF(J)
C2200 50V 33pF(J)
W2011
W2010
NOT MOUNT
W8011
W2009
L2023
22ohm100MHz
F_GND
A_GND
[FL1]
L2021
[FL1]
L2020
MEM2012TC151
NC
100(J)
R2175
R2172
+9V
C2203
100nF(Z)
25V
R2177
2.7K(J)
R2176
100(J)
V_MAIN_MC
604:1B
2SA1586-Y(TE85L)
Q2021
[TRP]
R2173
2.7K(J)
C2202
100nF(Z)
25V
R2174
100(J)
V_SUB_MC
604:1D
2SA1586-Y(TE85L)
Q2020
[TRP]
52HM85/62HM85
AV_CONNECTOR
SH.NO.
200



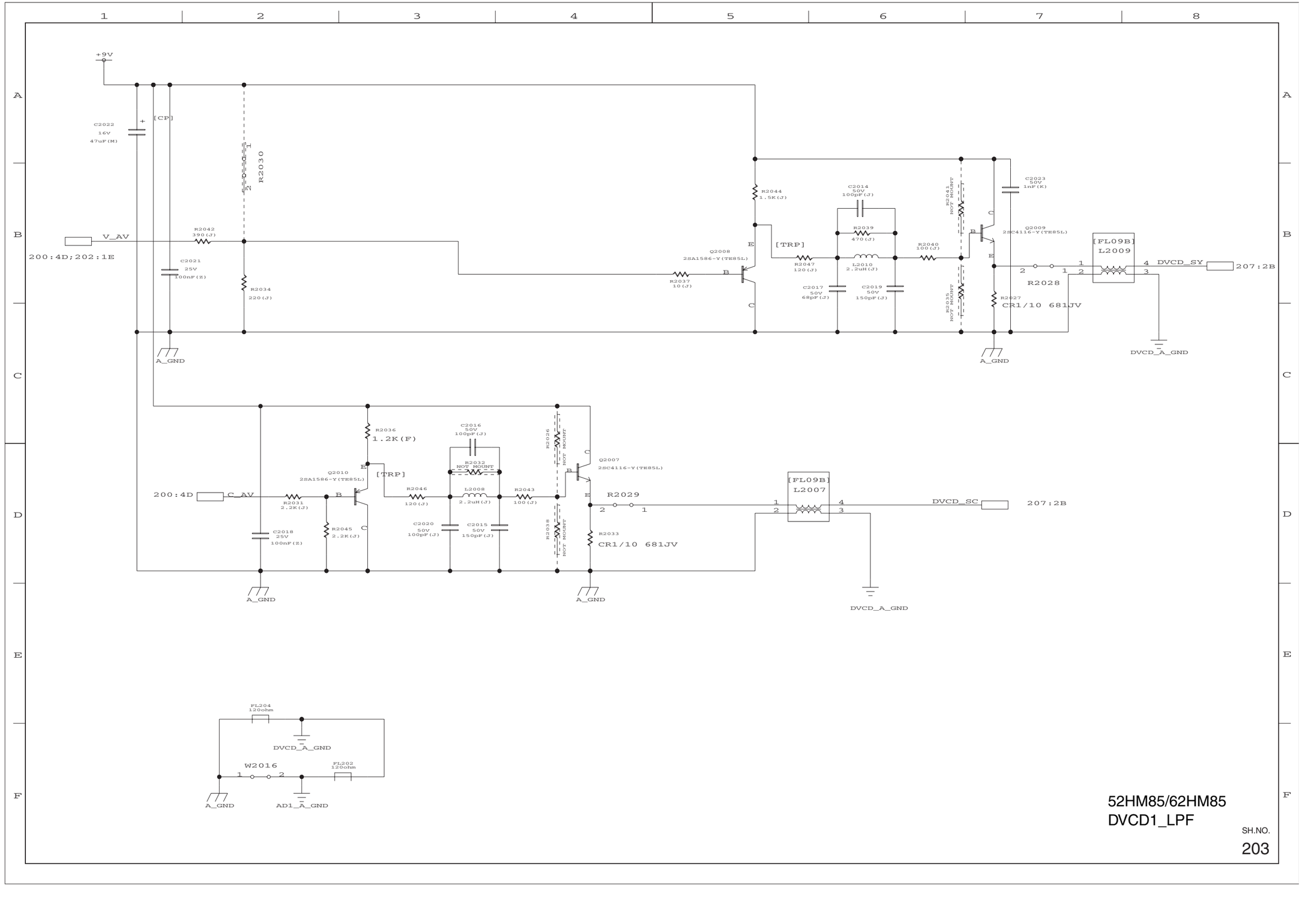
52HM85/62HM85
AD_LPF

SH.NO.
201



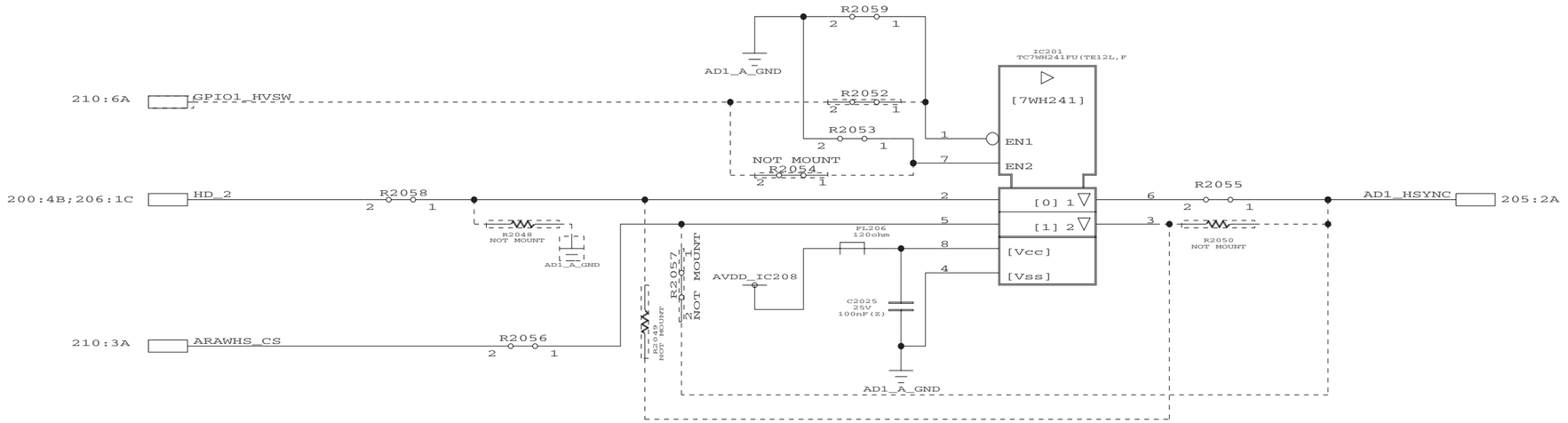
52HM85/62HM85
DVCD2_LPF

SH.NO.
202



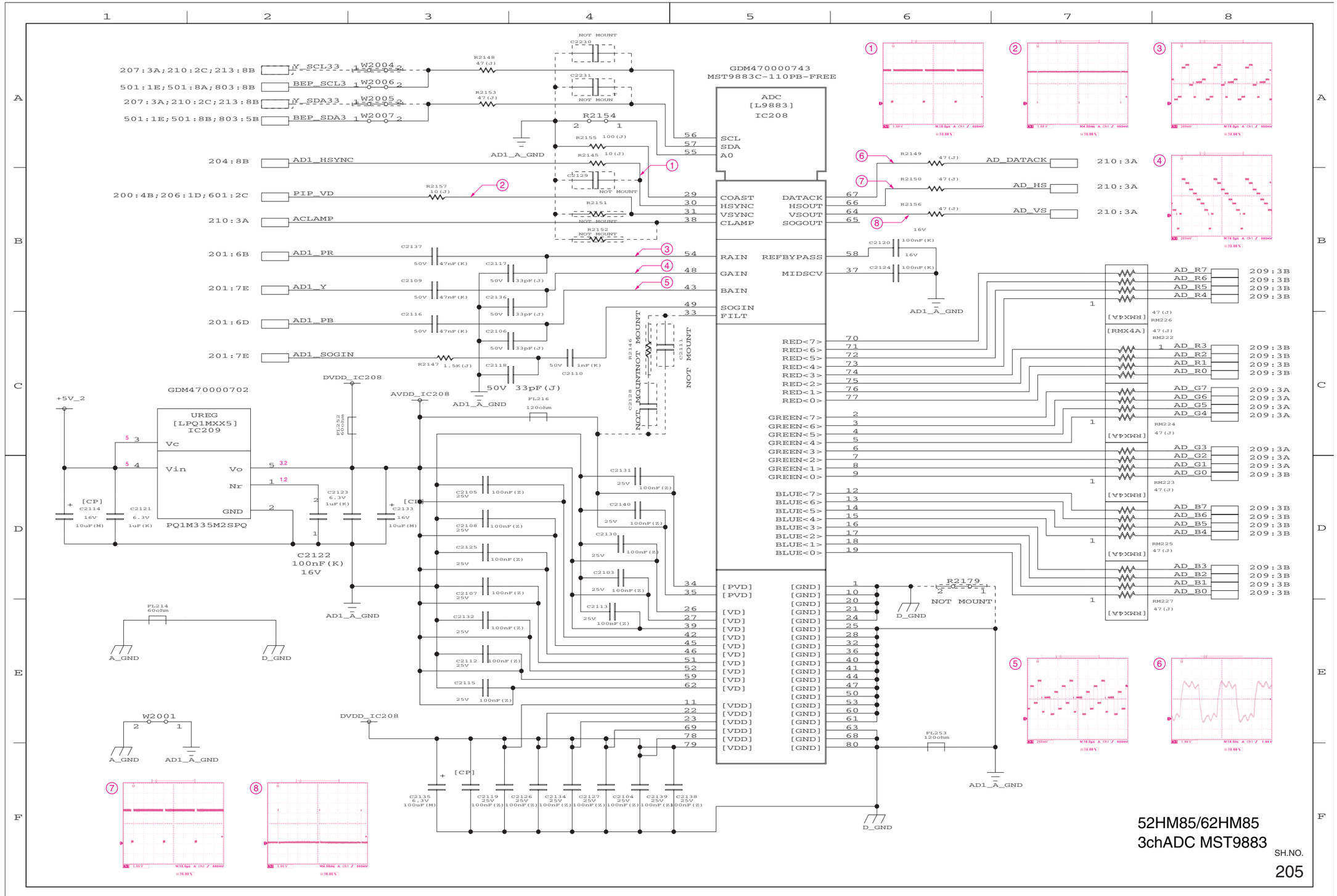
52HM85/62HM85
DVCD1_LPF

SH.NO.
203

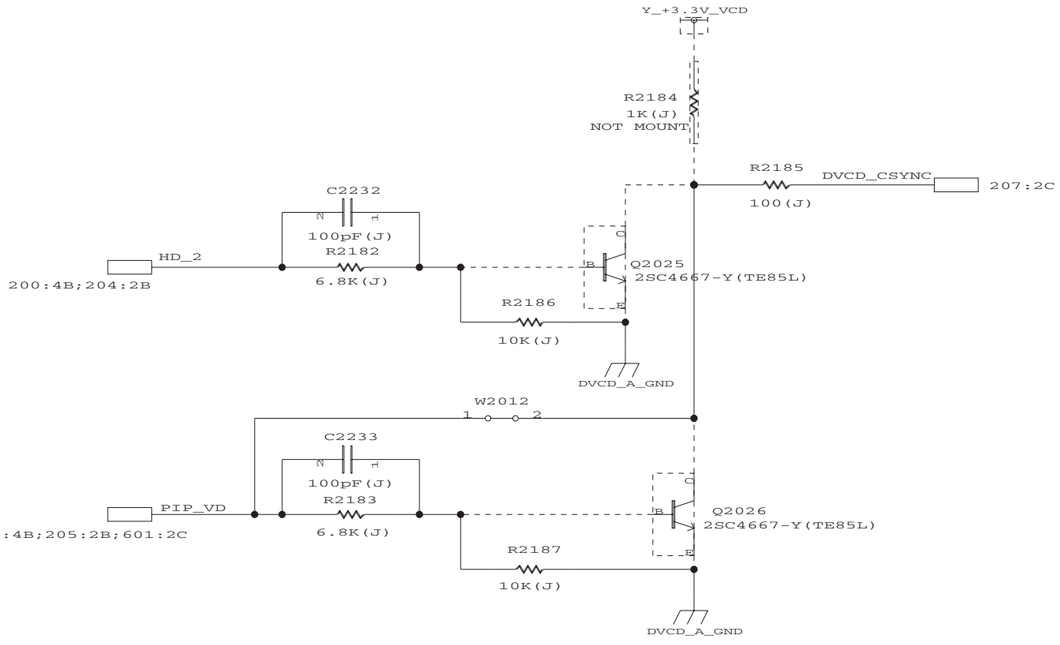


52HM85/62HM85
3chADC HD

SH.NO.
204


GDM470000743
MST9883C-110PB-FREE
ADC
[L9883]
IC208
GDM470000702
UREG
[LPQ1MXX5]
IC209
PQ1M335M2SPQ
52HM85/62HM85
3chADC MST9883
SH.NO.
205

(15/52)



52HM85/62HM85
DVCD CSYNCIN

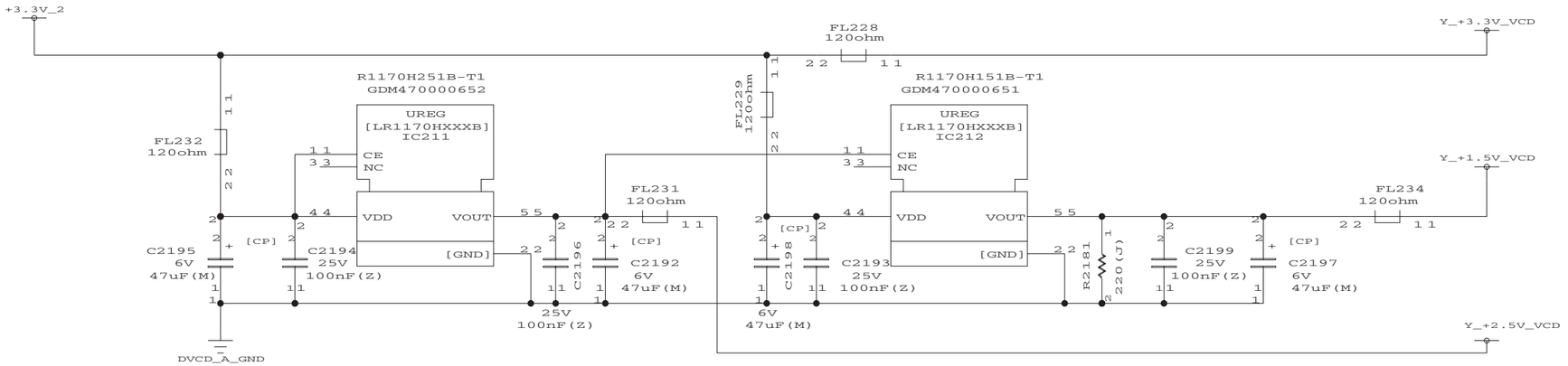
SH.NO.
206

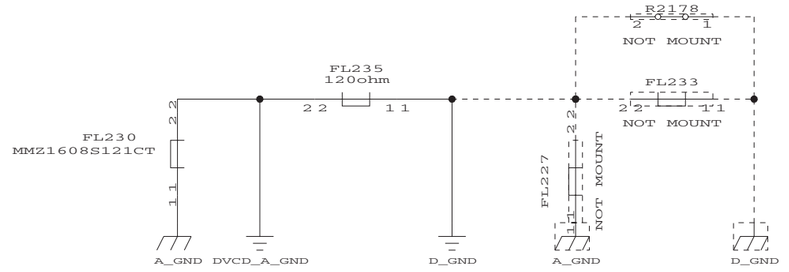
TC90A92AFG(BH,DRY)
GDM450000259

VIDEO DECODER
[U90A92]
IC210

52HM85/62HM85
DVCD TC90A92AFG

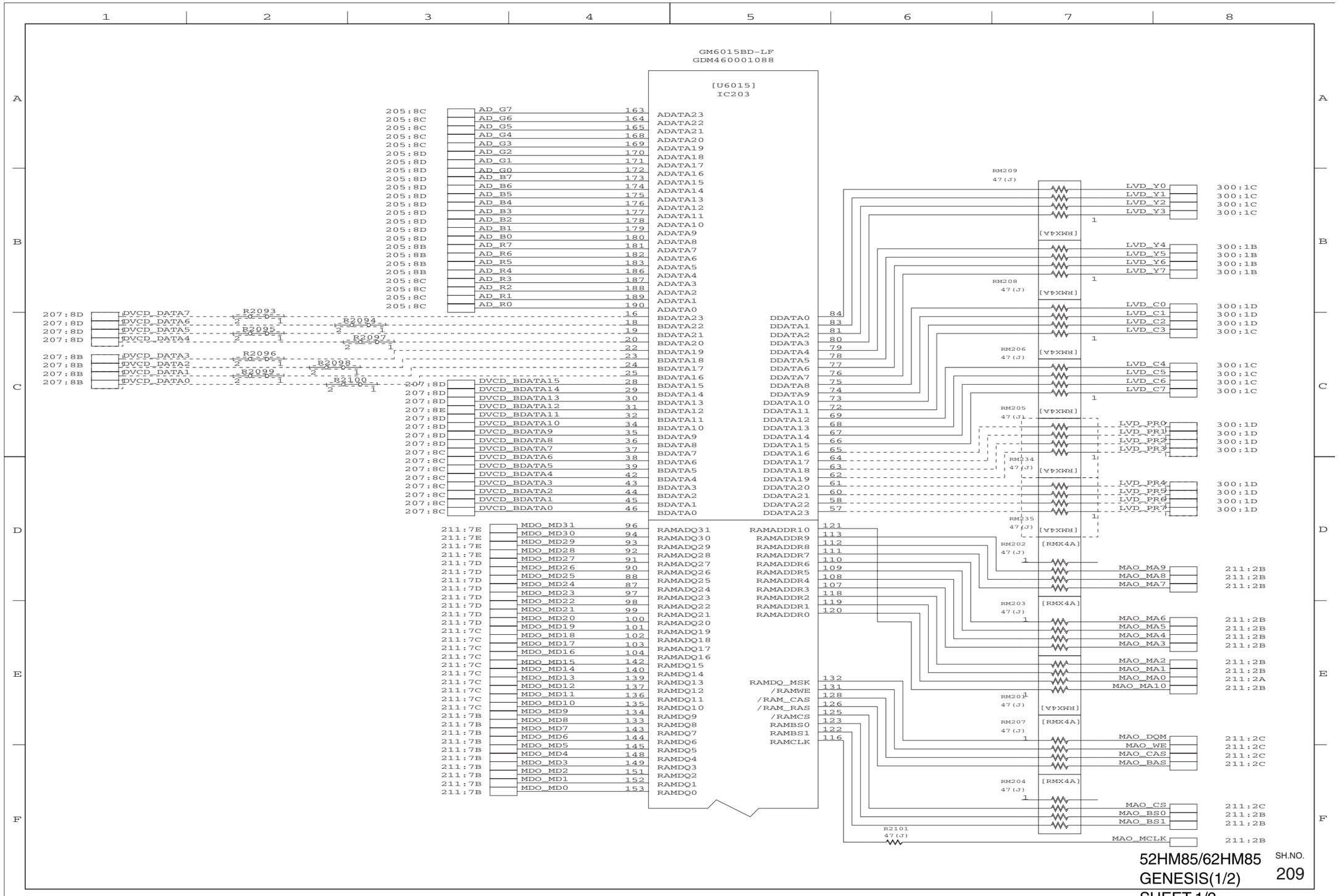
SH.NO.
207

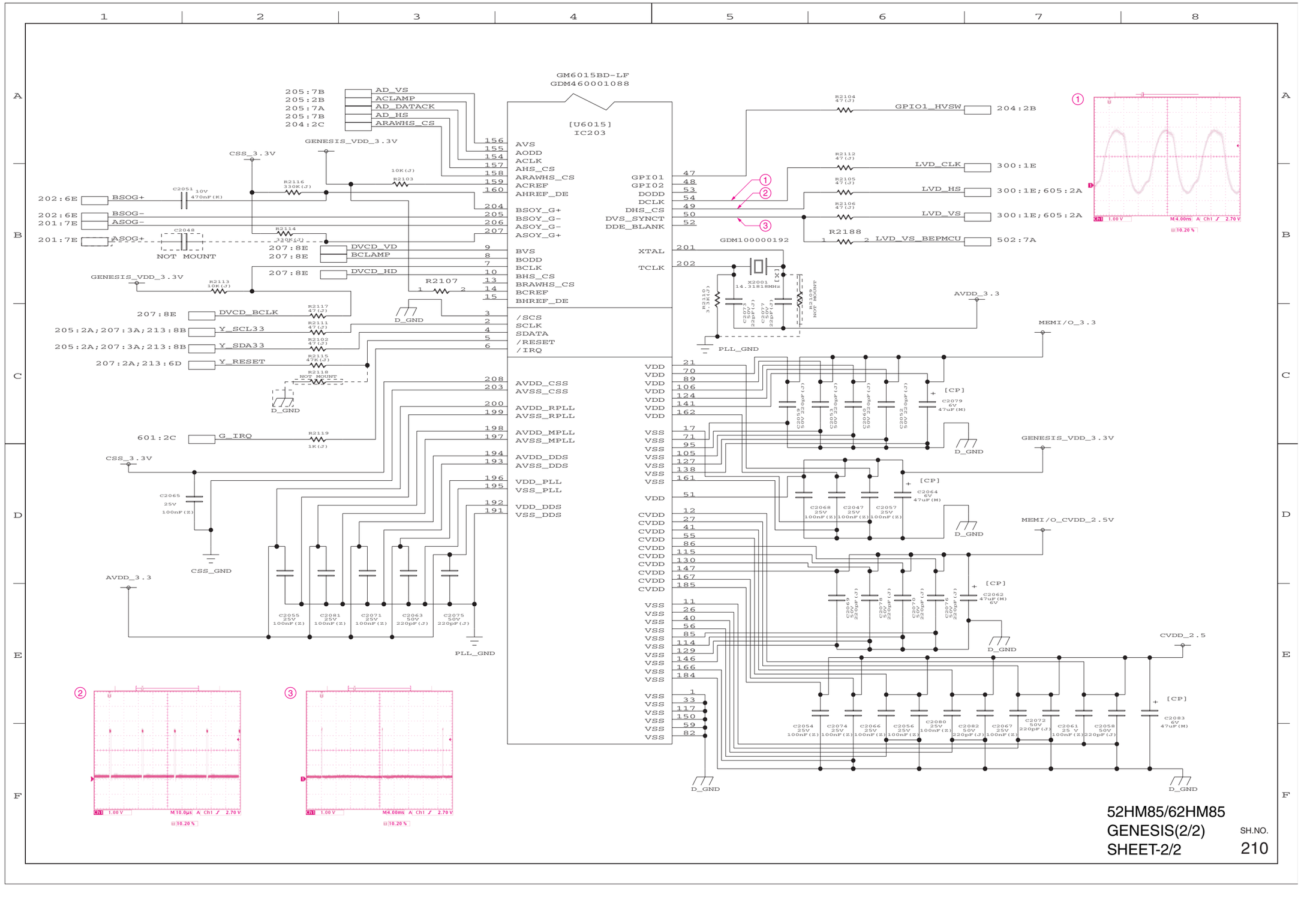


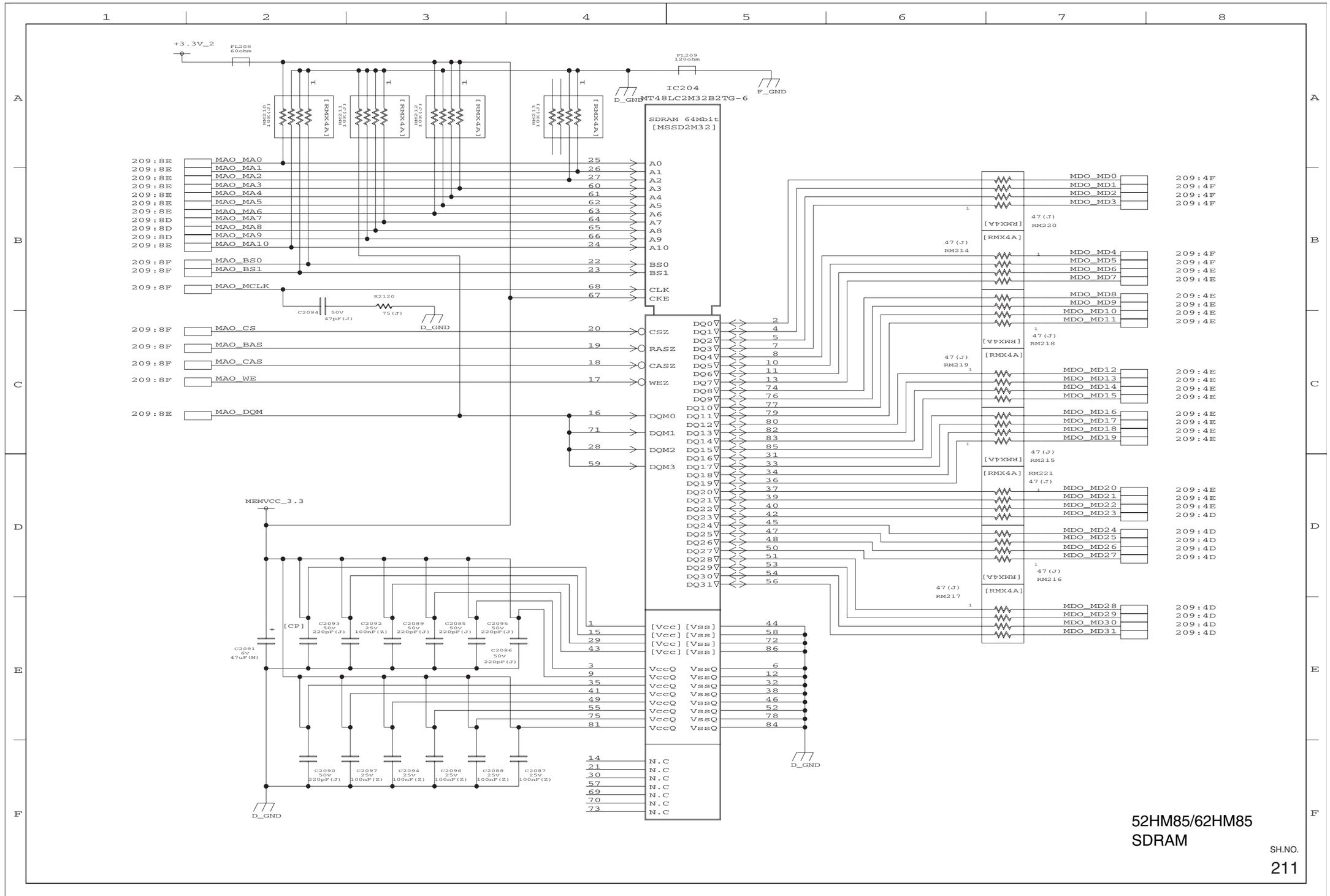


52HM85/62HM85
DVCD POWER

SH.NO.
208


GM6015BD-LF
GDM460001088
[U6015]
IC203
AD_G7 163 ADATA23
AD_G6 164 ADATA22
AD_G5 165 ADATA21
AD_G4 168 ADATA20
AD_G3 169 ADATA19
AD_G2 170 ADATA18
AD_G1 171 ADATA17
AD_G0 172 ADATA16
AD_B7 173 ADATA15
AD_B6 174 ADATA14
AD_B5 175 ADATA13
AD_B4 176 ADATA12
AD_B3 177 ADATA11
AD_B2 178 ADATA10
AD_B1 179 ADATA9
AD_B0 180 ADATA8
AD_R7 181 ADATA7
AD_R6 182 ADATA6
AD_R5 183 ADATA5
AD_R4 186 ADATA4
AD_R3 187 ADATA3
AD_R2 188 ADATA2
AD_R1 189 ADATA1
AD_R0 190 ADATA0
DVCD_DATA7 R2093 16 BDATA23
DVCD_DATA6 R2094 18 BDATA22
DVCD_DATA5 R2095 19 BDATA21
DVCD_DATA4 R2097 20 BDATA20
22 BDATA19
23 BDATA18
DVCD_DATA3 R2096 24 BDATA17
DVCD_DATA2 R2098 25 BDATA16
DVCD_DATA1 R2099 28 BDATA15
DVCD_DATA0 R2100 29 BDATA14
DVCD_BDATA15 30 BDATA13
DVCD_BDATA14 31 BDATA12
DVCD_BDATA13 32 BDATA11
DVCD_BDATA12 34 BDATA10
DVCD_BDATA11 35 BDATA9
DVCD_BDATA10 36 BDATA8
DVCD_BDATA9 37 BDATA7
DVCD_BDATA8 38 BDATA6
DVCD_BDATA7 39 BDATA5
DVCD_BDATA6 42 BDATA4
DVCD_BDATA5 43 BDATA3
DVCD_BDATA4 44 BDATA2
DVCD_BDATA3 45 BDATA1
DVCD_BDATA2 46 BDATA0
DVCD_BDATA1
DVCD_BDATA0
MDO_MD31 96 RAMADQ31
MDO_MD30 94 RAMADQ30
MDO_MD29 93 RAMADQ29
MDO_MD28 92 RAMADQ28
MDO_MD27 91 RAMADQ27
MDO_MD26 90 RAMADQ26
MDO_MD25 88 RAMADQ25
MDO_MD24 87 RAMADQ24
MDO_MD23 97 RAMADQ23
MDO_MD22 98 RAMADQ22
MDO_MD21 99 RAMADQ21
MDO_MD20 100 RAMADQ20
MDO_MD19 101 RAMADQ19
MDO_MD18 102 RAMADQ18
MDO_MD17 103 RAMADQ17
MDO_MD16 104 RAMADQ16
MDO_MD15 142 RAMDQ15
MDO_MD14 140 RAMDQ14
MDO_MD13 139 RAMDQ13
MDO_MD12 137 RAMDQ12
MDO_MD11 136 RAMDQ11
MDO_MD10 135 RAMDQ10
MDO_MD9 134 RAMDQ9
MDO_MD8 133 RAMDQ8
MDO_MD7 143 RAMDQ7
MDO_MD6 144 RAMDQ6
MDO_MD5 145 RAMDQ5
MDO_MD4 148 RAMDQ4
MDO_MD3 149 RAMDQ3
MDO_MD2 151 RAMDQ2
MDO_MD1 152 RAMDQ1
MDO_MD0 153 RAMDQ0
DDATA0 84
DDATA1 83
DDATA2 81
DDATA3 80
DDATA4 79
DDATA5 78
DDATA6 77
DDATA7 76
DDATA8 75
DDATA9 74
DDATA10 73
DDATA11 72
DDATA12 69
DDATA13 68
DDATA14 67
DDATA15 66
DDATA16 65
DDATA17 64
DDATA18 63
DDATA19 62
DDATA20 61
DDATA21 60
DDATA22 58
DDATA23 57
RAMADDR10 121
RAMADDR9 113
RAMADDR8 112
RAMADDR7 111
RAMADDR6 110
RAMADDR5 109
RAMADDR4 108
RAMADDR3 107
RAMADDR2 118
RAMADDR1 119
RAMADDR0 120
RAMDQ_MSK 132
/RAMWE 131
/RAM_CAS 128
/RAM_RAS 126
/RAMCS 125
RAMBS0 123
RAMBS1 122
RAMCLK 116
R2101 47(J)
RM209 47(J) [RMX4A]
RM208 47(J) [RMX4A]
RM206 47(J) [RMX4A]
RM205 47(J) [RMX4A]
RM234 47(J) [RMX4A]
RM235 47(J) [RMX4A]
RM202 47(J) [RMX4A]
RM203 47(J) [RMX4A]
RM201 47(J) [RMX4A]
RM207 47(J) [RMX4A]
RM204 47(J) [RMX4A]
LVD_Y0 300:1C
LVD_Y1 300:1C
LVD_Y2 300:1C
LVD_Y3 300:1C
LVD_Y4 300:1B
LVD_Y5 300:1B
LVD_Y6 300:1B
LVD_Y7 300:1B
LVD_C0 300:1D
LVD_C1 300:1D
LVD_C2 300:1D
LVD_C3 300:1C
LVD_C4 300:1C
LVD_C5 300:1C
LVD_C6 300:1C
LVD_C7 300:1C
LVD_PR0 300:1D
LVD_PR1 300:1D
LVD_PR2 300:1D
LVD_PR3 300:1D
LVD_PR4 300:1D
LVD_PR5 300:1D
LVD_PR6 300:1D
LVD_PR7 300:1D
MAO_MA9 211:2B
MAO_MA8 211:2B
MAO_MA7 211:2B
MAO_MA6 211:2B
MAO_MA5 211:2B
MAO_MA4 211:2B
MAO_MA3 211:2B
MAO_MA2 211:2B
MAO_MA1 211:2B
MAO_MA0 211:2A
MAO_MA10 211:2B
MAO_DQM 211:2C
MAO_WE 211:2C
MAO_CAS 211:2C
MAO_BAS 211:2C
MAO_CS 211:2C
MAO_BS0 211:2B
MAO_BS1 211:2B
MAO_MCLK 211:2B
52HM85/62HM85
GENESIS(1/2)
SHEET-1/2
SH.NO.
209


GM6015BD-LF
GDM460001088
[U6015]
IC203
205:7B AD_VS
205:2B ACLAMP
205:7A AD_DATACK
205:7B AD_HS
204:2C ARAWHS_CS
GENESIS_VDD_3.3V
CSS_3.3V
202:6E BSOG+
202:6E BSOG-
201:7E ASOG-
201:7E ASOG+
C2051 10V 470nF(K)
C2048
NOT MOUNT
R2116 330K(J)
R2103 10K(J)
R2114 330K(J)
207:8E DVCD_VD
207:8E BCLAMP
207:8E DVCD_HD
GENESIS_VDD_3.3V
R2113 10K(J)
R2107
D_GND
207:8E DVCD_BCLK
205:2A;207:3A;213:8B Y_SCL33
205:2A;207:3A;213:8B Y_SDA33
207:2A;213:6D Y_RESET
R2117 47(J)
R2111 47(J)
R2102 47(J)
R2115 47K(J)
R2118 NOT MOUNT
601:2C G_IRQ
R2119 1K(J)
CSS_3.3V
C2065 25V 100nF(Z)
CSS_GND
AVDD_3.3
C2055 25V 100nF(Z)
C2081 25V 100nF(Z)
C2071 25V 100nF(Z)
C2063 50V 220pF(J)
C2075 50V 220pF(J)
PLL_GND
156 AVS
155 AODD
154 ACLK
157 AHS_CS
158 ARAWHS_CS
159 ACREF
160 AHREF_DE
204 BSOY_G+
205 BSOY_G-
206 ASOY_G-
207 ASOY_G+
9 BVS
8 BODD
7 BCLK
10 BHS_CS
13 BRAWHS_CS
14 BCREF
15 BHREF_DE
3 /SCS
2 SCLK
4 SDATA
5 /RESET
6 /IRQ
208 AVDD_CSS
203 AVSS_CSS
200 AVDD_RPLL
199 AVSS_RPLL
198 AVDD_MPLL
197 AVSS_MPLL
194 AVDD_DDS
193 AVSS_DDS
196 VDD_PLL
195 VSS_PLL
192 VDD_DDS
191 VSS_DDS
47 GPIO1
48 GPIO2
53 DODD
54 DCLK
49 DHS_CS
50 DVS_SYNCT
52 DDE_BLANK
201 XTAL
202 TCLK
21 70 89 106 124 141 162 VDD
17 71 95 105 127 138 161 VSS
51 VDD
12 27 41 55 86 115 130 147 167 185 CVDD
11 26 40 56 85 114 129 146 166 184 VSS
1 33 117 150 59 82 VSS
R2104 47(J) GPIO1_HVSW 204:2B
R2112 47(J) LVD_CLK 300:1E
R2105 47(J) LVD_HS 300:1E;605:2A
R2106 47(J) LVD_VS 300:1E;605:2A
R2188 LVD_VS_BEPMCU 502:7A
GDM100000192
X2001 14.31818MHz
R2110 3.3K(J)
C2077 50V 22pF(J)
C2067 50V 22pF(J)
R2109 NOT MOUNT
PLL_GND
AVDD_3.3
MEMI/O_3.3
[CP]
C2079 6V 47uF(M)
C2059 50V 220pF(J)
C2053 50V 220pF(J)
C2060 50V 220pF(J)
C2052 50V 220pF(J)
D_GND
GENESIS_VDD_3.3V
C2064 6V 47uF(M)
C2068 25V 100nF(Z)
C2047 25V 100nF(Z)
C2057 25V 100nF(Z)
MEMI/O_CVDD_2.5
C2062 47uF(M) 6V
C2069 50V 220pF(J)
C2078 50V 220pF(J)
C2070 50V 220pF(J)
C2076 50V 220pF(J)
CVDD_2.5
C2083 6V 47uF(M)
C2054 25V 100nF(Z)
C2074 25V 100nF(Z)
C2066 25V 100nF(Z)
C2056 25V 100nF(Z)
C2080 25V 100nF(Z)
C2082 50V 220pF(J)
C2067 25V 100nF(Z)
C2072 50V 220pF(J)
C2061 25 V 100nF(Z)
C2058 50V 220pF(J)
Ch1 1.00 V M4.00ms A Ch1 2.70 V
10.20 %
Ch1 1.00 V M10.0µs A Ch1 2.70 V
10.20 %
Ch1 1.00 V M4.00ms A Ch1 2.70 V
10.20 %
52HM85/62HM85
GENESIS(2/2)
SHEET-2/2
SH.NO.
210


+3.3V_2
FL208
60ohm
FL209
120ohm
D_GND
F_GND
IC204
MT48LC2M32B2TG-6
SDRAM 64Mbit
[MSSD2M32]
MAO_MA0
MAO_MA1
MAO_MA2
MAO_MA3
MAO_MA4
MAO_MA5
MAO_MA6
MAO_MA7
MAO_MA8
MAO_MA9
MAO_MA10
MAO_BS0
MAO_BS1
MAO_MCLK
MAO_CS
MAO_BAS
MAO_CAS
MAO_WE
MAO_DQM
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
BS0
BS1
CLK
CKE
CSZ
RASZ
CASZ
WEZ
DQM0
DQM1
DQM2
DQM3
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
DQ8
DQ9
DQ10
DQ11
DQ12
DQ13
DQ14
DQ15
DQ16
DQ17
DQ18
DQ19
DQ20
DQ21
DQ22
DQ23
DQ24
DQ25
DQ26
DQ27
DQ28
DQ29
DQ30
DQ31
[Vcc] [Vss]
VccQ VssQ
N.C
MDO_MD0
MDO_MD1
MDO_MD2
MDO_MD3
MDO_MD4
MDO_MD5
MDO_MD6
MDO_MD7
MDO_MD8
MDO_MD9
MDO_MD10
MDO_MD11
MDO_MD12
MDO_MD13
MDO_MD14
MDO_MD15
MDO_MD16
MDO_MD17
MDO_MD18
MDO_MD19
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MDO_MD25
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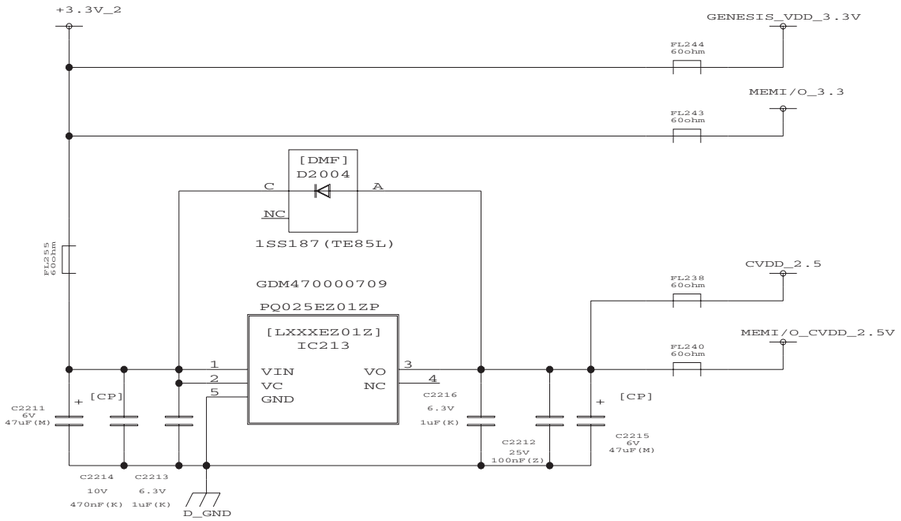
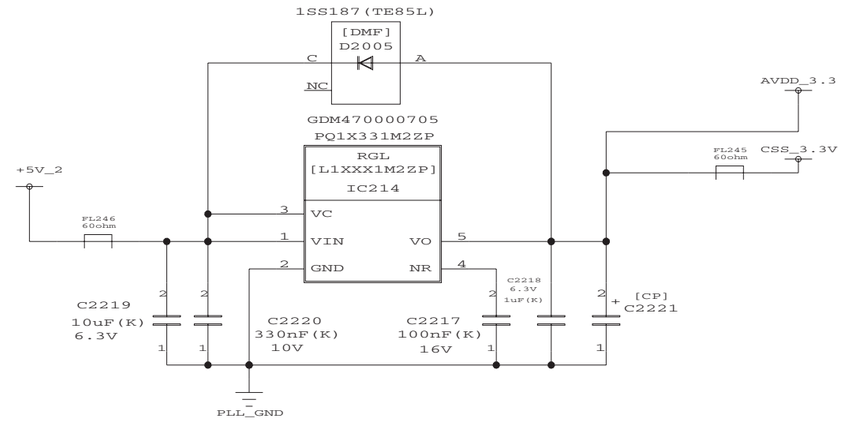
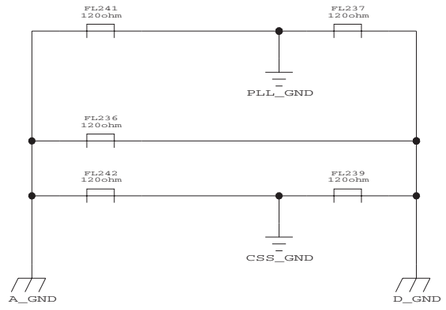
MDO_MD27
MDO_MD28
MDO_MD29
MDO_MD30
MDO_MD31
[RMX4A]
47(J)
RM220
RM214
RM218
RM219
RM215
RM221
RM216
RM217
R2120
75(J)
C2084
50V
47pF(J)
MEMVCC_3.3
[CP]
C2091
6V
47uF(M)
C2093
50V
220pF(J)
C2092
25V
100nF(Z)
C2089
50V
220pF(J)
C2085
50V
220pF(J)
C2095
50V
220pF(J)
C2086
50V
220pF(J)
C2090
50V
220pF(J)
C2097
25V
100nF(Z)
C2094
25V
100nF(Z)
C2096
25V
100nF(Z)
C2088
25V
100nF(Z)
C2087
25V
100nF(Z)
52HM85/62HM85
SDRAM
SH.NO.
211

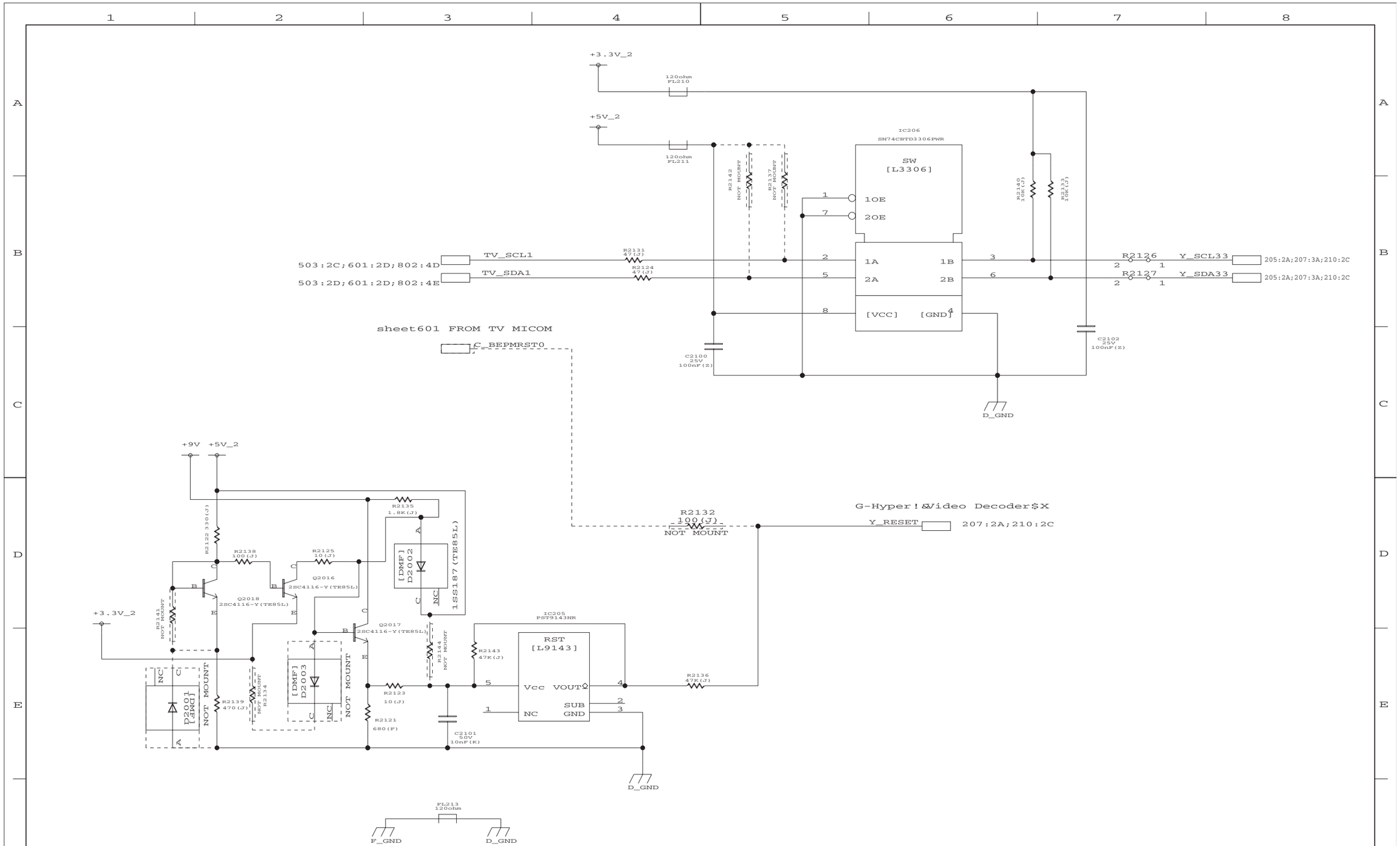






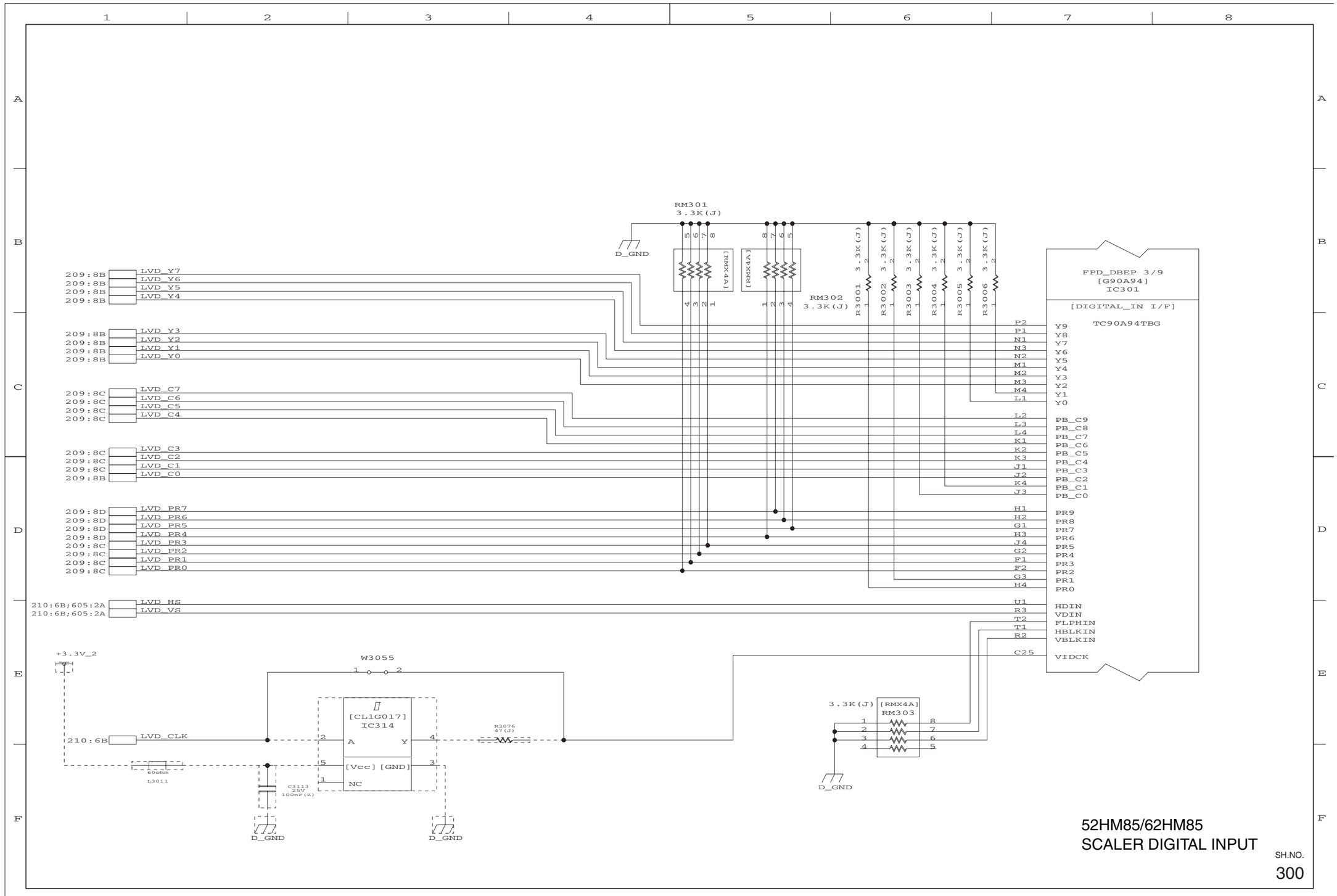
52HM85/62HM85
GENESIS_POWER

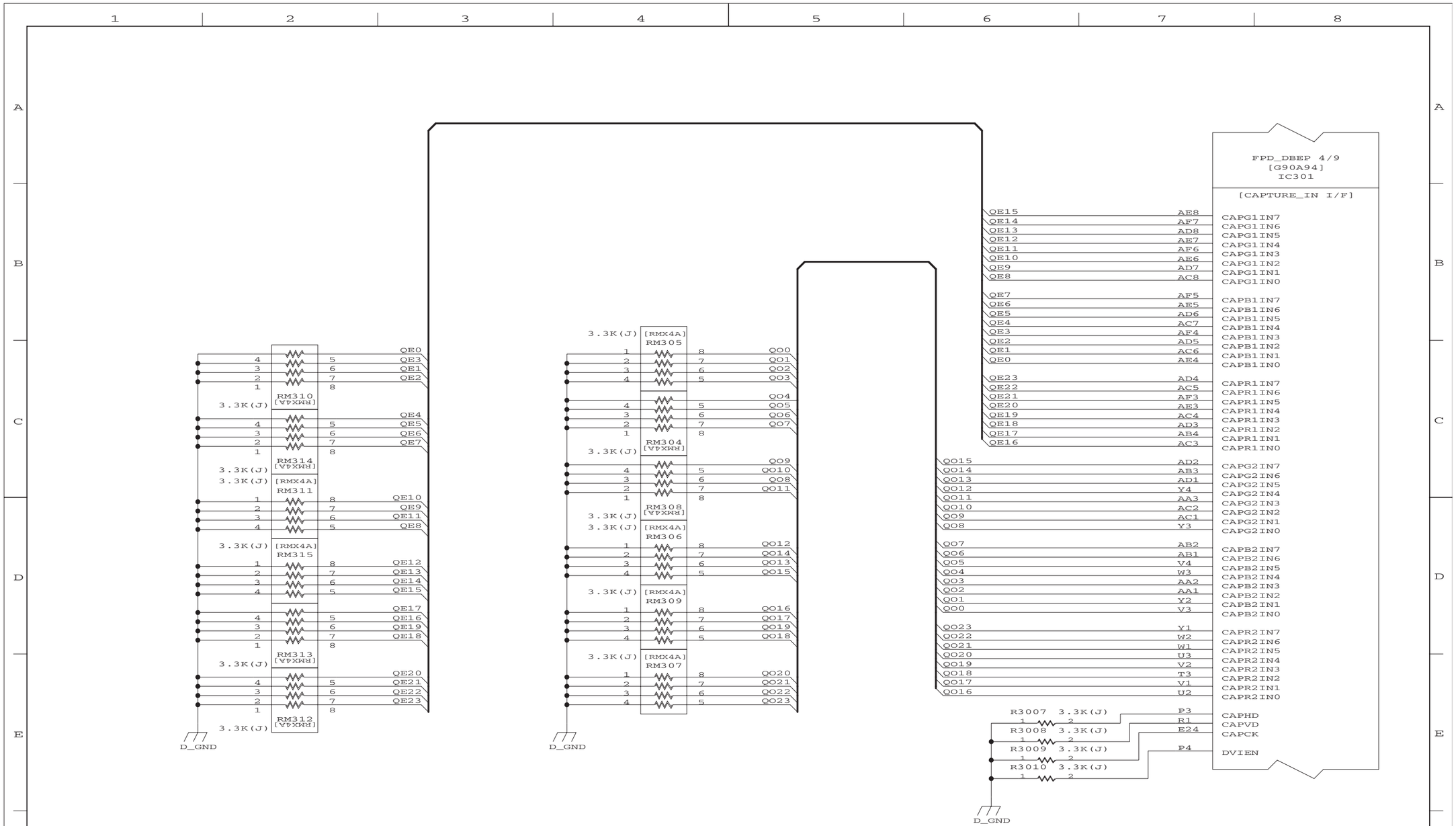
SH.NO.
212



52HM85/62HM85
GENESIS_IIC

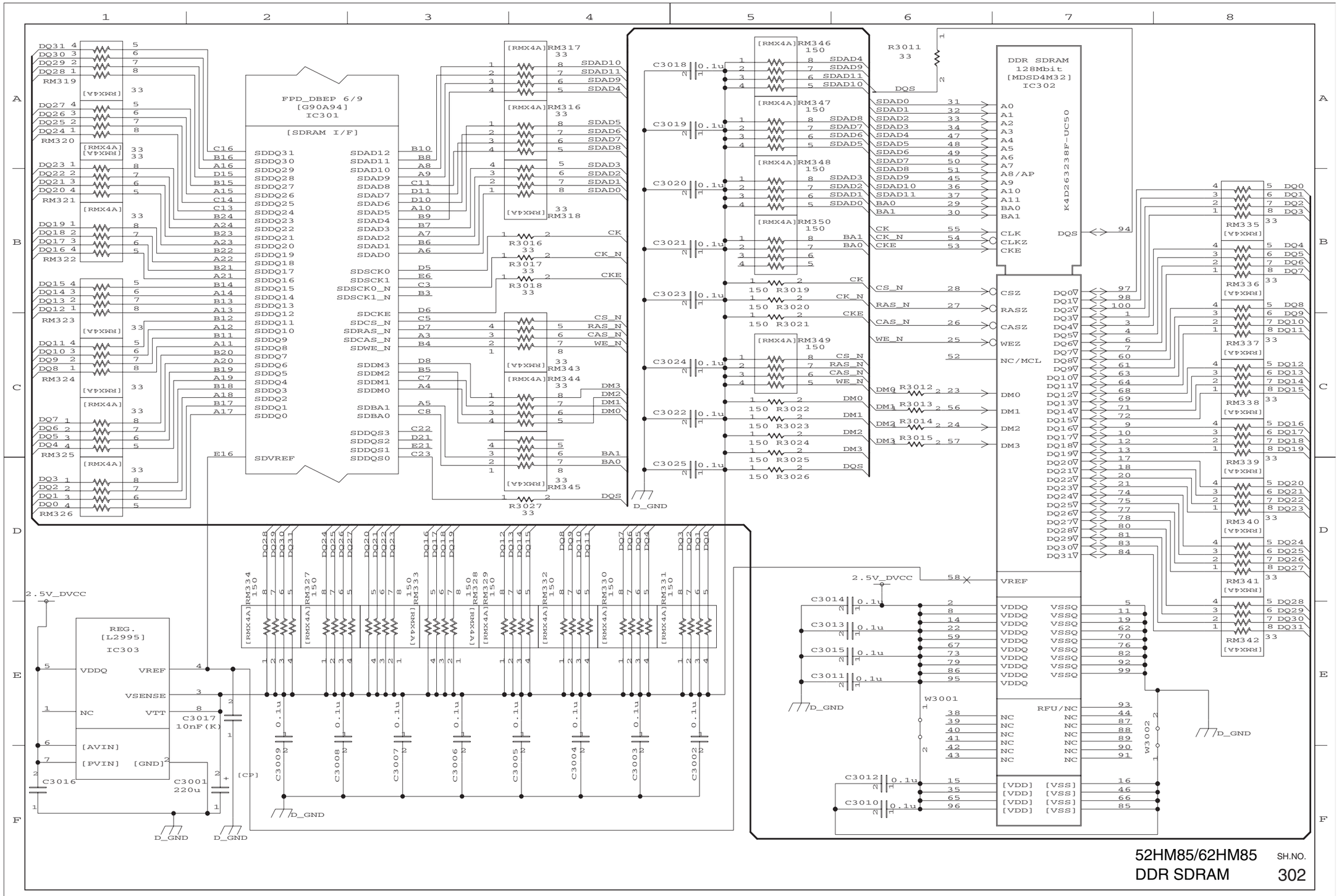
SH.NO.
213

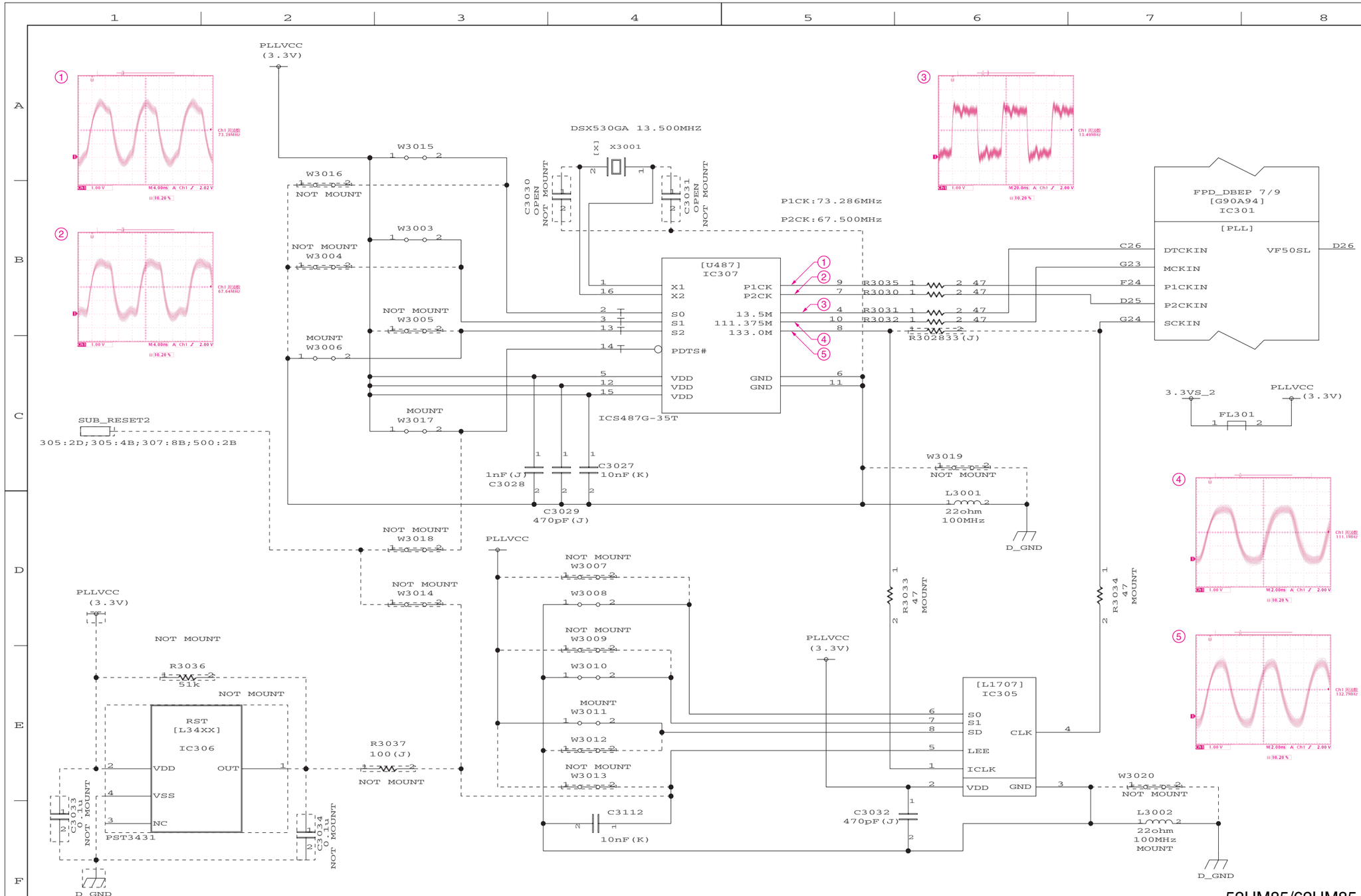

RM301
3.3K(J)
D_GND
[RMX4A]
RM302
3.3K(J)
R3001
R3002
R3003
R3004
R3005
R3006
FPD_DBEP 3/9
[G90A94]
IC301
[DIGITAL_IN I/F]
TC90A94TBG
LVD_Y7
LVD_Y6
LVD_Y5
LVD_Y4
LVD_Y3
LVD_Y2
LVD_Y1
LVD_Y0
LVD_C7
LVD_C6
LVD_C5
LVD_C4
LVD_C3
LVD_C2
LVD_C1
LVD_C0
LVD_PR7
LVD_PR6
LVD_PR5
LVD_PR4
LVD_PR3
LVD_PR2
LVD_PR1
LVD_PR0
LVD_HS
LVD_VS
LVD_CLK
+3.3V_2
W3055
[CL1G017]
IC314
[Vcc] [GND]
NC
R3076
47(J)
60ohm
L3011
C3113
25V
100nP(Z)
RM303
HDIN
VDIN
FLPHIN
HBLKIN
VBLKIN
VIDCK
52HM85/62HM85
SCALER DIGITAL INPUT
SH.NO.
300

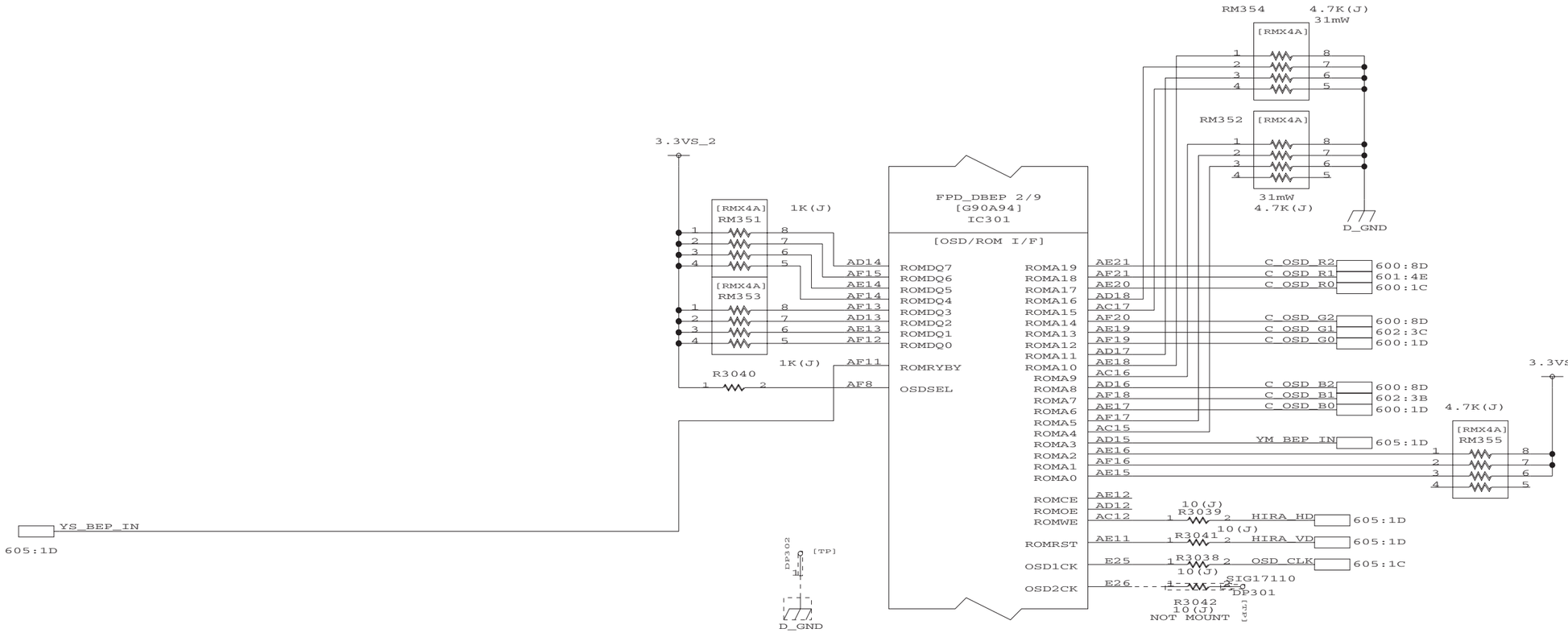


52HM85/62HM85
SCALER CAPTURE INPUT

SH.NO.
301

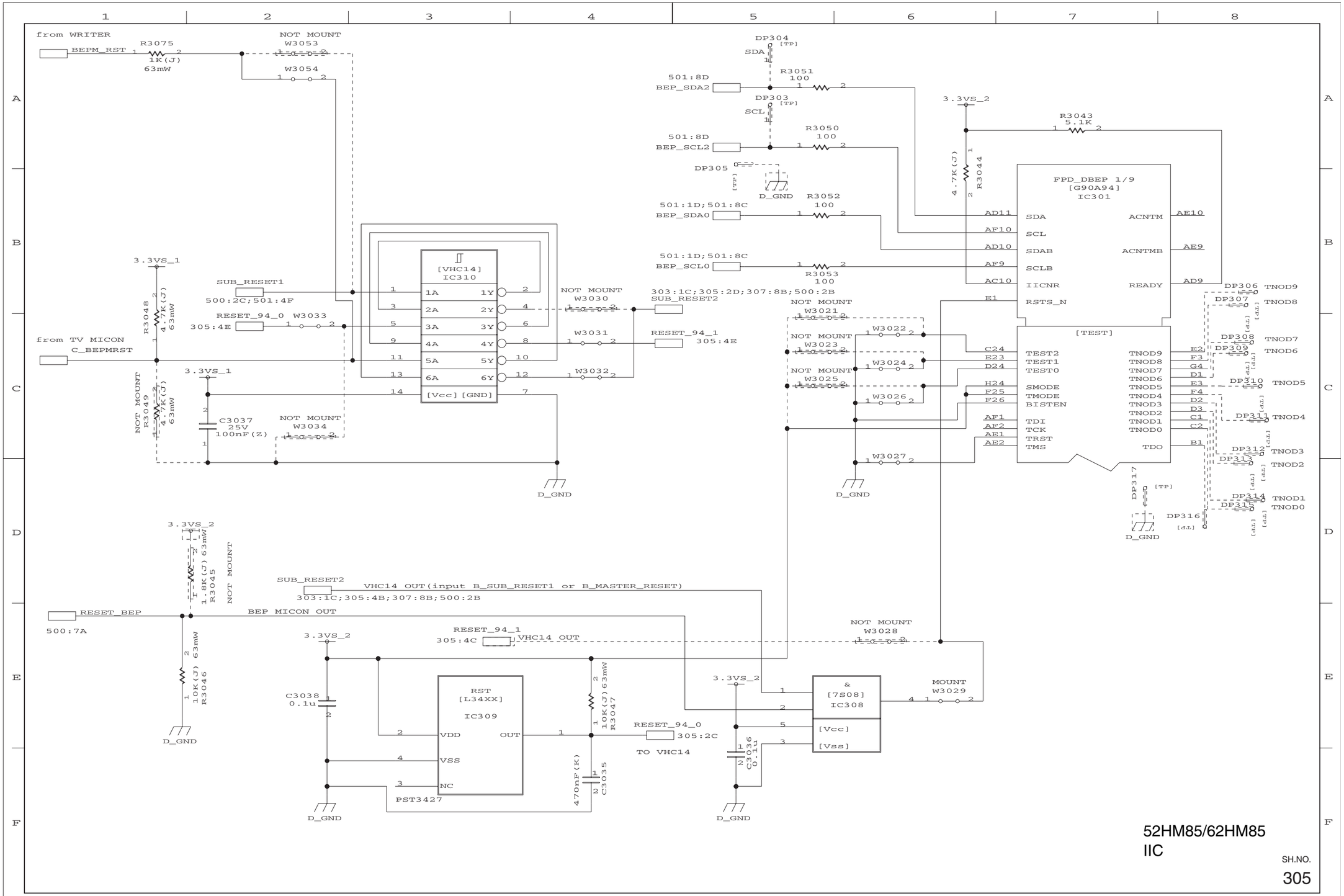

FPD_DBEP 6/9
[G90A94]
IC301
[SDRAM I/F]
DDR SDRAM
128Mbit
[MDSD4M32]
IC302
K4D263238F-UC50
REG.
[L2995]
IC303
2.5V_DVCC
D_GND
52HM85/62HM85
DDR SDRAM
SH.NO.
302


PLLVCC
(3.3V)
DSX530GA 13.500MHZ
X3001
C3030
OPEN
NOT MOUNT
C3031
OPEN
NOT MOUNT
P1CK:73.286MHz
P2CK:67.500MHz
W3015
W3016
NOT MOUNT
W3003
NOT MOUNT
W3004
NOT MOUNT
W3005
MOUNT
W3006
MOUNT
W3017
[U487]
IC307
X1
X2
S0
S1
S2
PDTS#
VDD
VDD
VDD
P1CK
P2CK
13.5M
111.375M
133.0M
GND
GND
ICS487G-35T
R3035 47
R3030 47
R3031 47
R3032 47
R302833(J)
FPD_DBEP 7/9
[G90A94]
IC301
[PLL]
DTCKIN
MCKIN
P1CKIN
P2CKIN
SCKIN
VF50SL
C26
G23
F24
D25
G24
D26
3.3VS_2
PLLVCC
(3.3V)
FL301
SUB_RESET2
305:2D;305:4B;307:8B;500:2B
C3027
10nF(K)
1nF(J)
C3028
C3029
470pF(J)
W3019
NOT MOUNT
L3001
220hm
100MHz
D_GND
NOT MOUNT
W3018
NOT MOUNT
W3014
PLLVCC
NOT MOUNT
W3007
W3008
NOT MOUNT
W3009
W3010
MOUNT
W3011
W3012
NOT MOUNT
W3013
C3112
10nF(K)
R3033
47
MOUNT
R3034
47
MOUNT
PLLVCC
(3.3V)
C3032
470pF(J)
[L1707]
IC305
S0
S1
SD
LEE
ICLK
VDD
GND
CLK
W3020
NOT MOUNT
L3002
220hm
100MHz
MOUNT
D_GND
PLLVCC
(3.3V)
NOT MOUNT
R3036
51k
NOT MOUNT
RST
[L34XX]
IC306
VDD
VSS
NC
OUT
PST3431
C3033
0.1u
NOT MOUNT
C3034
0.1u
NOT MOUNT
R3037
100(J)
NOT MOUNT
D_GND
52HM85/62HM85
SCALER PLL
SH.NO.
303



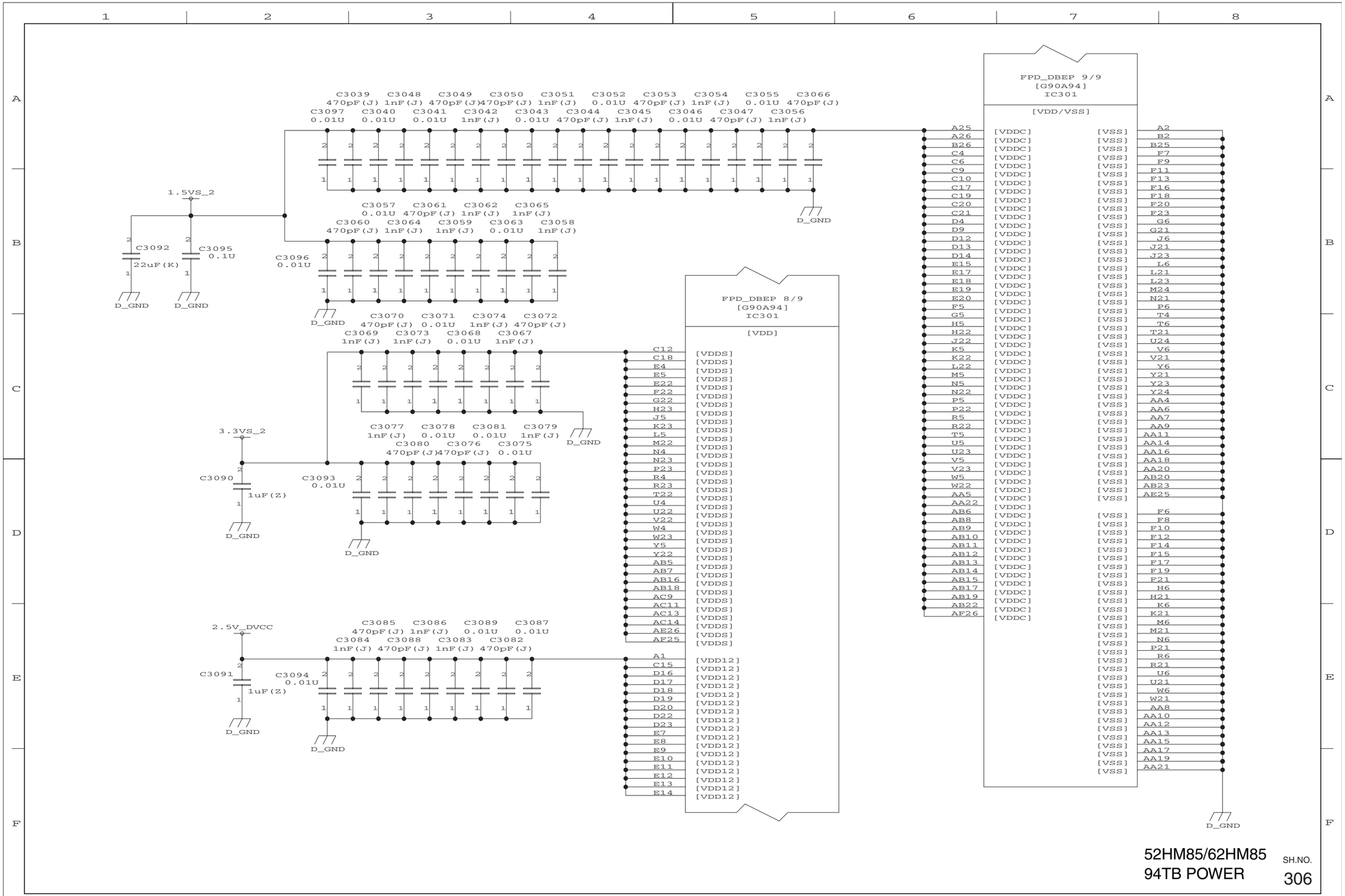
52HM85/62HM85
OSD for North America

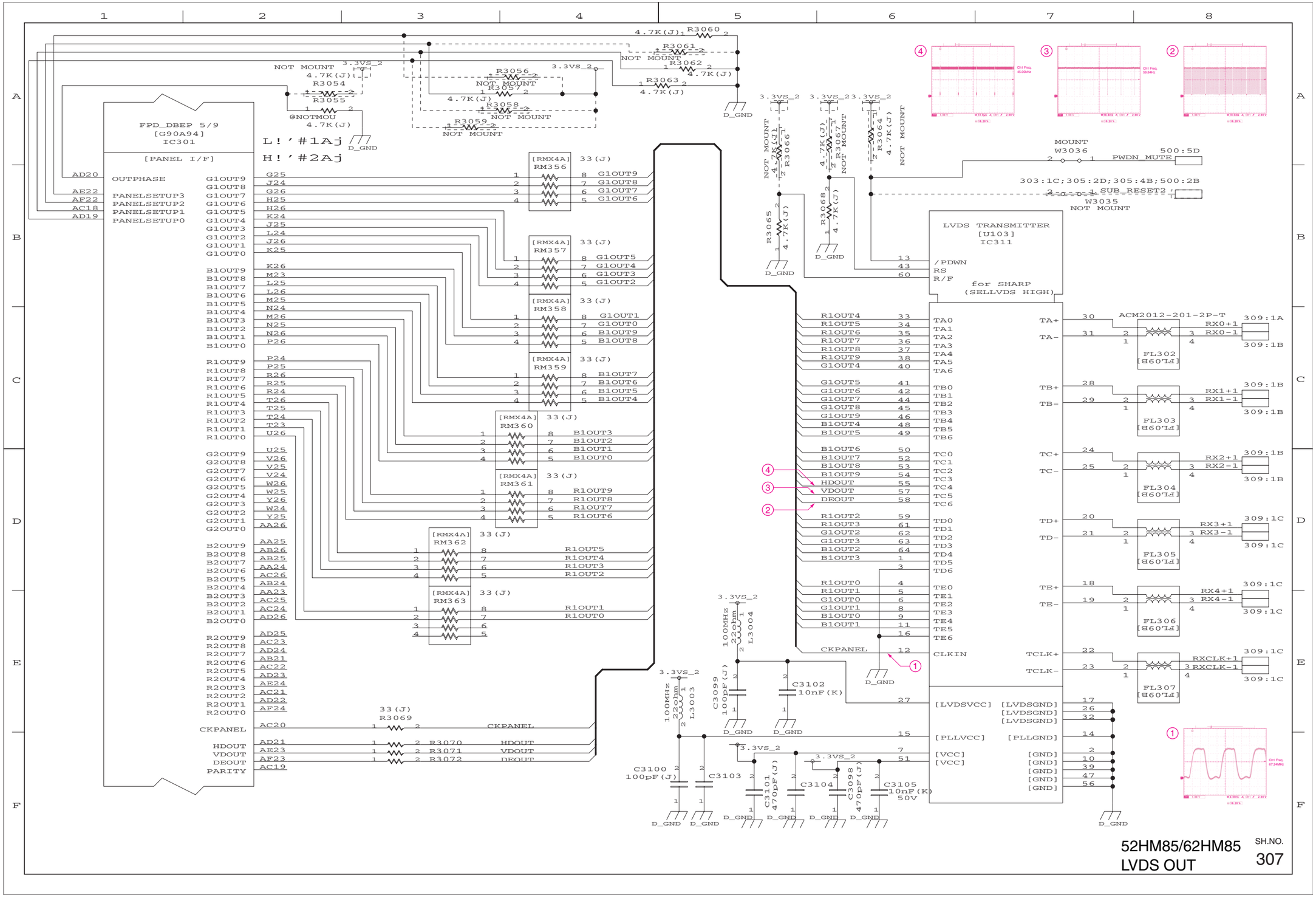
SH.NO.
304

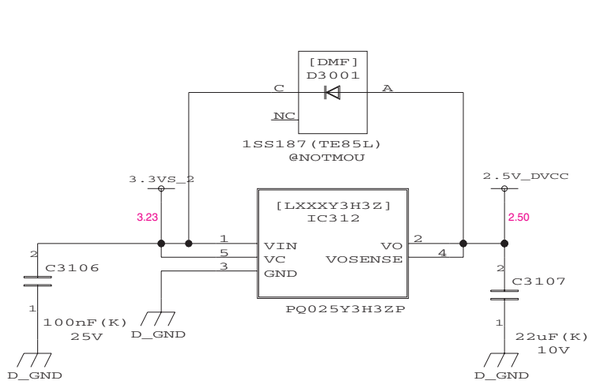


52HM85/62HM85
IIC

SH.NO.
305

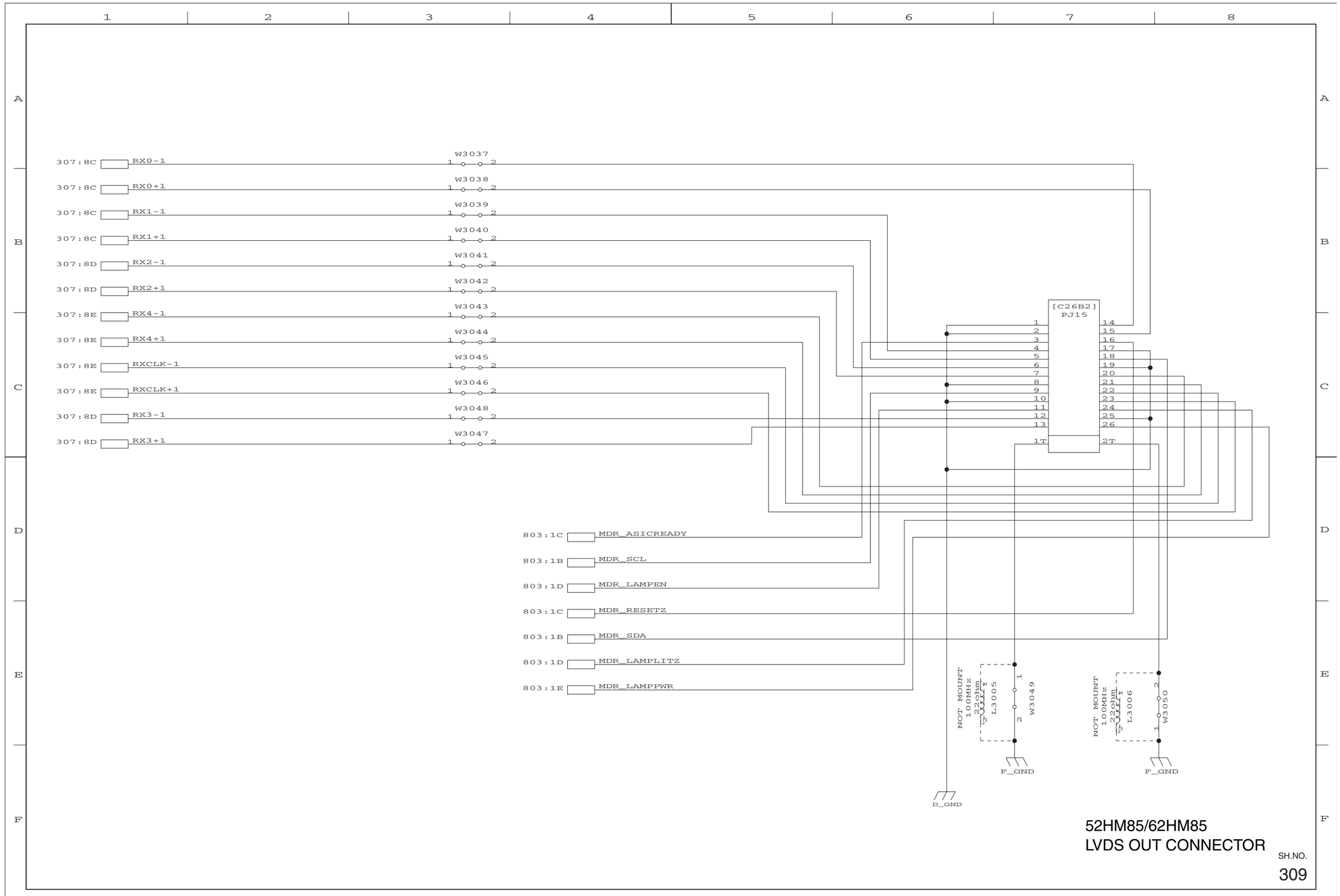

C3039 C3048 C3049 C3050 C3051 C3052 C3053 C3054 C3055 C3066
470pF(J) 1nF(J) 470pF(J)470pF(J) 1nF(J) 0.01U 470pF(J) 1nF(J) 0.01U 470pF(J)
C3097 C3040 C3041 C3042 C3043 C3044 C3045 C3046 C3047 C3056
0.01U 0.01U 0.01U 1nF(J) 0.01U 470pF(J) 1nF(J) 0.01U 470pF(J) 1nF(J)
D_GND
1.5VS_2
C3057 C3061 C3062 C3065
0.01U 470pF(J) 1nF(J) 1nF(J)
C3060 C3064 C3059 C3063 C3058
470pF(J) 1nF(J) 1nF(J) 0.01U 1nF(J)
C3092
22uF(K)
C3095
0.1U
C3096
0.01U
D_GND
D_GND
D_GND
C3070 C3071 C3074 C3072
470pF(J) 0.01U 1nF(J) 470pF(J)
C3069 C3073 C3068 C3067
1nF(J) 1nF(J) 0.01U 1nF(J)
C3077 C3078 C3081 C3079
1nF(J) 0.01U 0.01U 1nF(J)
D_GND
C3080 C3076 C3075
470pF(J)470pF(J) 0.01U
3.3VS_2
C3090
1uF(Z)
C3093
0.01U
D_GND
D_GND
C3085 C3086 C3089 C3087
470pF(J) 1nF(J) 0.01U 0.01U
C3084 C3088 C3083 C3082
1nF(J) 470pF(J) 1nF(J) 470pF(J)
2.5V_DVCC
C3091
1uF(Z)
C3094
0.01U
D_GND
D_GND
FPD_DBEP 8/9
[G90A94]
IC301
[VDD]
C12 [VDDS]
C18 [VDDS]
E4 [VDDS]
E5 [VDDS]
E22 [VDDS]
F22 [VDDS]
G22 [VDDS]
H23 [VDDS]
J5 [VDDS]
K23 [VDDS]
L5 [VDDS]
M22 [VDDS]
N4 [VDDS]
N23 [VDDS]
P23 [VDDS]
R4 [VDDS]
R23 [VDDS]
T22 [VDDS]
U4 [VDDS]
U22 [VDDS]
V22 [VDDS]
W4 [VDDS]
W23 [VDDS]
Y5 [VDDS]
Y22 [VDDS]
AB5 [VDDS]
AB7 [VDDS]
AB16 [VDDS]
AB18 [VDDS]
AC9 [VDDS]
AC11 [VDDS]
AC13 [VDDS]
AC14 [VDDS]
AE26 [VDDS]
AF25 [VDDS]
A1 [VDD12]
C15 [VDD12]
D16 [VDD12]
D17 [VDD12]
D18 [VDD12]
D19 [VDD12]
D20 [VDD12]
D22 [VDD12]
D23 [VDD12]
E7 [VDD12]
E8 [VDD12]
E9 [VDD12]
E10 [VDD12]
E11 [VDD12]
E12 [VDD12]
E13 [VDD12]
E14 [VDD12]
FPD_DBEP 9/9
[G90A94]
IC301
[VDD/VSS]
A25 [VDDC]
A26 [VDDC]
B26 [VDDC]
C4 [VDDC]
C6 [VDDC]
C9 [VDDC]
C10 [VDDC]
C17 [VDDC]
C19 [VDDC]
C20 [VDDC]
C21 [VDDC]
D4 [VDDC]
D9 [VDDC]
D12 [VDDC]
D13 [VDDC]
D14 [VDDC]
E15 [VDDC]
E17 [VDDC]
E18 [VDDC]
E19 [VDDC]
E20 [VDDC]
F5 [VDDC]
G5 [VDDC]
H5 [VDDC]
H22 [VDDC]
J22 [VDDC]
K5 [VDDC]
K22 [VDDC]
L22 [VDDC]
M5 [VDDC]
N5 [VDDC]
N22 [VDDC]
P5 [VDDC]
P22 [VDDC]
R5 [VDDC]
R22 [VDDC]
T5 [VDDC]
U5 [VDDC]
U23 [VDDC]
V5 [VDDC]
V23 [VDDC]
W5 [VDDC]
W22 [VDDC]
AA5 [VDDC]
AA22 [VDDC]
AB6 [VDDC]
AB8 [VDDC]
AB9 [VDDC]
AB10 [VDDC]
AB11 [VDDC]
AB12 [VDDC]
AB13 [VDDC]
AB14 [VDDC]
AB15 [VDDC]
AB17 [VDDC]
AB19 [VDDC]
AB22 [VDDC]
AF26 [VDDC]
[VSS] A2
[VSS] B2
[VSS] B25
[VSS] F7
[VSS] F9
[VSS] F11
[VSS] F13
[VSS] F16
[VSS] F18
[VSS] F20
[VSS] F23
[VSS] G6
[VSS] G21
[VSS] J6
[VSS] J21
[VSS] J23
[VSS] L6
[VSS] L21
[VSS] L23
[VSS] M24
[VSS] N21
[VSS] P6
[VSS] T4
[VSS] T6
[VSS] T21
[VSS] U24
[VSS] V6
[VSS] V21
[VSS] Y6
[VSS] Y21
[VSS] Y23
[VSS] Y24
[VSS] AA4
[VSS] AA6
[VSS] AA7
[VSS] AA9
[VSS] AA11
[VSS] AA14
[VSS] AA16
[VSS] AA18
[VSS] AA20
[VSS] AB20
[VSS] AB23
[VSS] AE25
[VSS] F6
[VSS] F8
[VSS] F10
[VSS] F12
[VSS] F14
[VSS] F15
[VSS] F17
[VSS] F19
[VSS] F21
[VSS] H6
[VSS] H21
[VSS] K6
[VSS] K21
[VSS] M6
[VSS] M21
[VSS] N6
[VSS] P21
[VSS] R6
[VSS] R21
[VSS] U6
[VSS] U21
[VSS] W6
[VSS] W21
[VSS] AA8
[VSS] AA10
[VSS] AA12
[VSS] AA13
[VSS] AA15
[VSS] AA17
[VSS] AA19
[VSS] AA21
D_GND
52HM85/62HM85
94TB POWER
SH.NO.
306

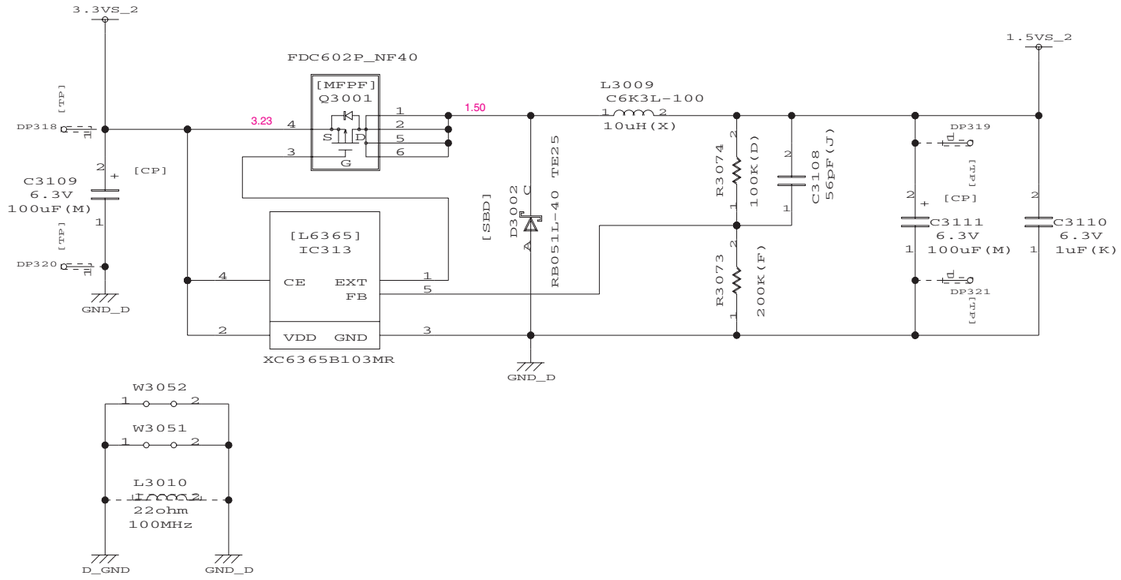

FPD_DBEP 5/9
[G90A94]
IC301
[PANEL I/F]
L!'#1Aj
H!'#2Aj
AD20 OUTPHASE
AE22 PANELSETUP3
AF22 PANELSETUP2
AC18 PANELSETUP1
AD19 PANELSETUP0
G1OUT9 G25
G1OUT8 J24
G1OUT7 G26
G1OUT6 H25
G1OUT5 H26
G1OUT4 K24
G1OUT3 J25
G1OUT2 L24
G1OUT1 J26
G1OUT0 K25
B1OUT9 K26
B1OUT8 M23
B1OUT7 L25
B1OUT6 L26
B1OUT5 M25
B1OUT4 N24
B1OUT3 M26
B1OUT2 N25
B1OUT1 N26
B1OUT0 P26
R1OUT9 P24
R1OUT8 P25
R1OUT7 R26
R1OUT6 R24
R1OUT5 T26
R1OUT4 T25
R1OUT3 T24
R1OUT2 T23
R1OUT1 U26
R1OUT0
G2OUT9 U25
G2OUT8 V26
G2OUT7 V25
G2OUT6 V24
G2OUT5 W26
G2OUT4 W25
G2OUT3 Y26
G2OUT2 W24
G2OUT1 Y25
G2OUT0 AA26
B2OUT9 AA25
B2OUT8 AB26
B2OUT7 AB25
B2OUT6 AA24
B2OUT5 AC26
B2OUT4 AB24
B2OUT3 AA23
B2OUT2 AC25
B2OUT1 AC24
B2OUT0 AD26
R2OUT9 AD25
R2OUT8 AC23
R2OUT7 AD24
R2OUT6 AB21
R2OUT5 AC22
R2OUT4 AD23
R2OUT3 AE24
R2OUT2 AC21
R2OUT1 AD22
R2OUT0 AF24
CKPANEL AC20
HDOUT AD21
VDOUT AE23
DEOUT AF23
PARITY AC19
NOT MOUNT
4.7K(J) R3054
R3055
@NOTMOU
4.7K(J)
D_GND
3.3VS_2
4.7K(J) R3060
NOT MOUNT R3061
R3062 4.7K(J)
R3063 4.7K(J)
R3056
NOT MOUNT R3057
4.7K(J)
R3058
R3059 NOT MOUNT
[RMX4A] RM356 33(J)
[RMX4A] RM357 33(J)
[RMX4A] RM358 33(J)
[RMX4A] RM359 33(J)
[RMX4A] RM360 33(J)
[RMX4A] RM361 33(J)
[RMX4A] RM362 33(J)
[RMX4A] RM363 33(J)
G1OUT9 G1OUT8 G1OUT7 G1OUT6
G1OUT5 G1OUT4 G1OUT3 G1OUT2
G1OUT1 G1OUT0 B1OUT9 B1OUT8
B1OUT7 B1OUT6 B1OUT5 B1OUT4
B1OUT3 B1OUT2 B1OUT1 B1OUT0
R1OUT9 R1OUT8 R1OUT7 R1OUT6
R1OUT5 R1OUT4 R1OUT3 R1OUT2
R1OUT1 R1OUT0
R3069 33(J)
R3070 R3071 R3072
CKPANEL HDOUT VDOUT DEOUT
NOT MOUNT R3066 4.7K(J)
R3067 4.7K(J) NOT MOUNT
R3064 4.7K(J) NOT MOUNT
R3065 4.7K(J)
R3068 4.7K(J)
MOUNT W3036
PWDN_MUTE 500:5D
303:1C;305:2D;305:4B;500:2B
SUB_RESET2
W3035 NOT MOUNT
LVDS TRANSMITTER
[U103]
IC311
/PDWN
RS
R/F
for SHARP
(SELLVDS HIGH)
R1OUT4 R1OUT5 R1OUT6 R1OUT7
R1OUT8 R1OUT9 G1OUT4
G1OUT5 G1OUT6 G1OUT7 G1OUT8
G1OUT9 B1OUT4 B1OUT5
B1OUT6 B1OUT7 B1OUT8 B1OUT9
HDOUT VDOUT DEOUT
R1OUT2 R1OUT3 G1OUT2 G1OUT3
B1OUT2 B1OUT3
R1OUT0 R1OUT1 G1OUT0 G1OUT1
B1OUT0 B1OUT1
CKPANEL
TA0 TA1 TA2 TA3 TA4 TA5 TA6
TB0 TB1 TB2 TB3 TB4 TB5 TB6
TC0 TC1 TC2 TC3 TC4 TC5 TC6
TD0 TD1 TD2 TD3 TD4 TD5 TD6
TE0 TE1 TE2 TE3 TE4 TE5 TE6
CLKIN
[LVDSVCC] [LVDSGND] [LVDSGND] [LVDSGND]
[PLLVCC] [PLLGND]
[VCC] [VCC] [GND] [GND] [GND] [GND] [GND]
TA+ TA- TB+ TB- TC+ TC- TD+ TD- TE+ TE- TCLK+ TCLK-
ACM2012-201-2P-T
FL302 FL303 FL304 FL305 FL306 FL307
309:1A 309:1B 309:1B 309:1B 309:1C 309:1C 309:1C 309:1C
RX0+1 RX0-1 RX1+1 RX1-1 RX2+1 RX2-1 RX3+1 RX3-1 RX4+1 RX4-1 RXCLK+1 RXCLK-1
C3099 100pF(J) C3102 10nF(K)
C3100 100pF(J) C3103 C3101 470pF(J) C3104 C3098 470pF(J) C3105 10nF(K) 50V
100MHz 220ohm L3003 L3004
52HM85/62HM85
LVDS OUT
SH.NO.
307



52HM85/62HM85
Power (3.3V_2 to 2.5V_DVCC)

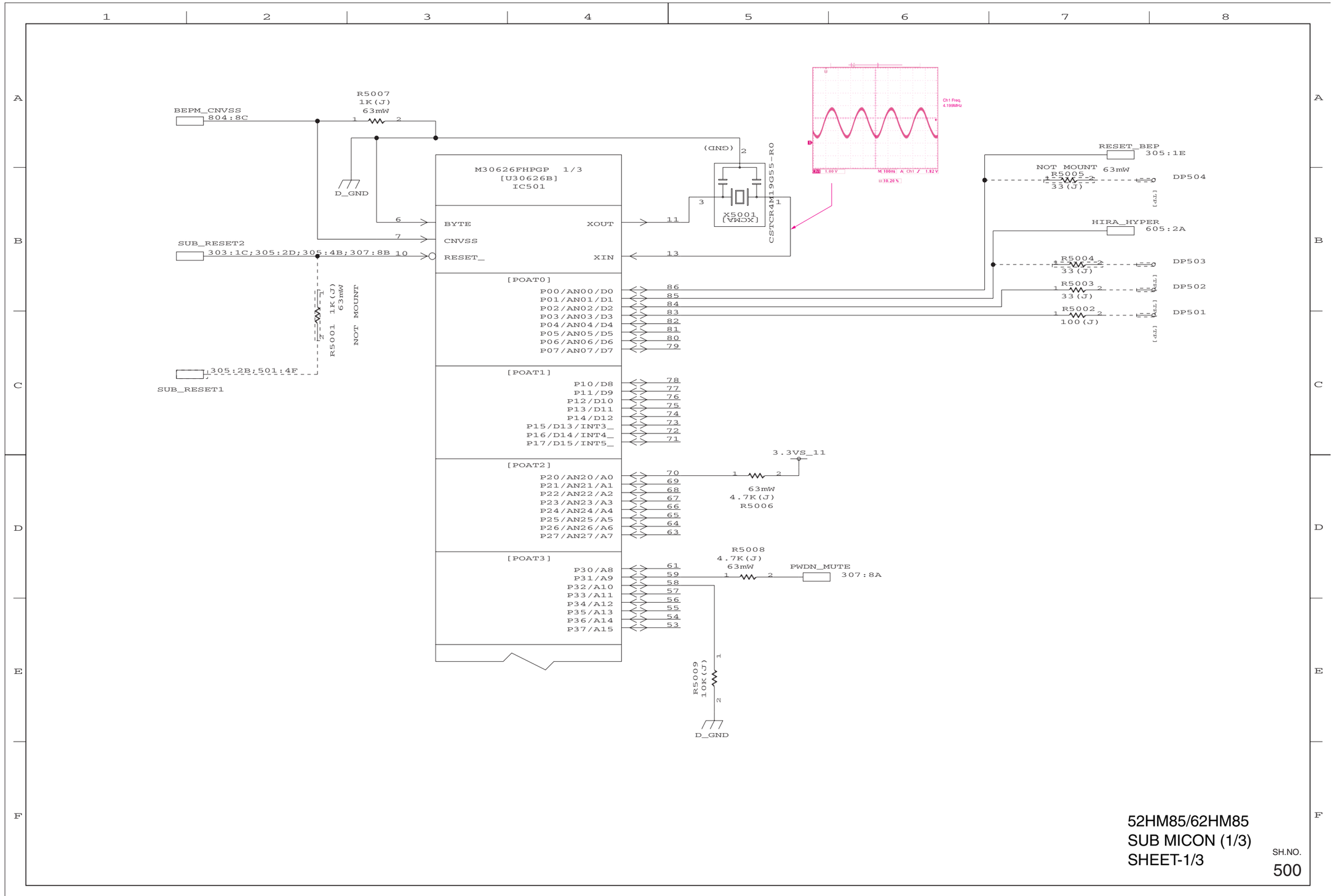
SH.NO.
308


1
2
3
4
5
6
7
8
A
B
C
D
E
F
307:8C RX0-1
307:8C RX0+1
307:8C RX1-1
307:8C RX1+1
307:8D RX2-1
307:8D RX2+1
307:8E RX4-1
307:8E RX4+1
307:8E RXCLK-1
307:8E RXCLK+1
307:8D RX3-1
307:8D RX3+1
W3037
W3038
W3039
W3040
W3041
W3042
W3043
W3044
W3045
W3046
W3048
W3047
[C26B2]
PJ15
803:1C MDR_ASICREADY
803:1B MDR_SCL
803:1D MDR_LAMPEN
803:1C MDR_RESETZ
803:1B MDR_SDA
803:1D MDR_LAMPLITZ
803:1E MDR_LAMPPWR
NOT MOUNT
100MHz
220ohm
2012T
L3005
W3049
NOT MOUNT
100MHz
220ohm
2012T
L3006
W3050
F_GND
F_GND
D_GND
52HM85/62HM85
LVDS OUT CONNECTOR
SH.NO.
309



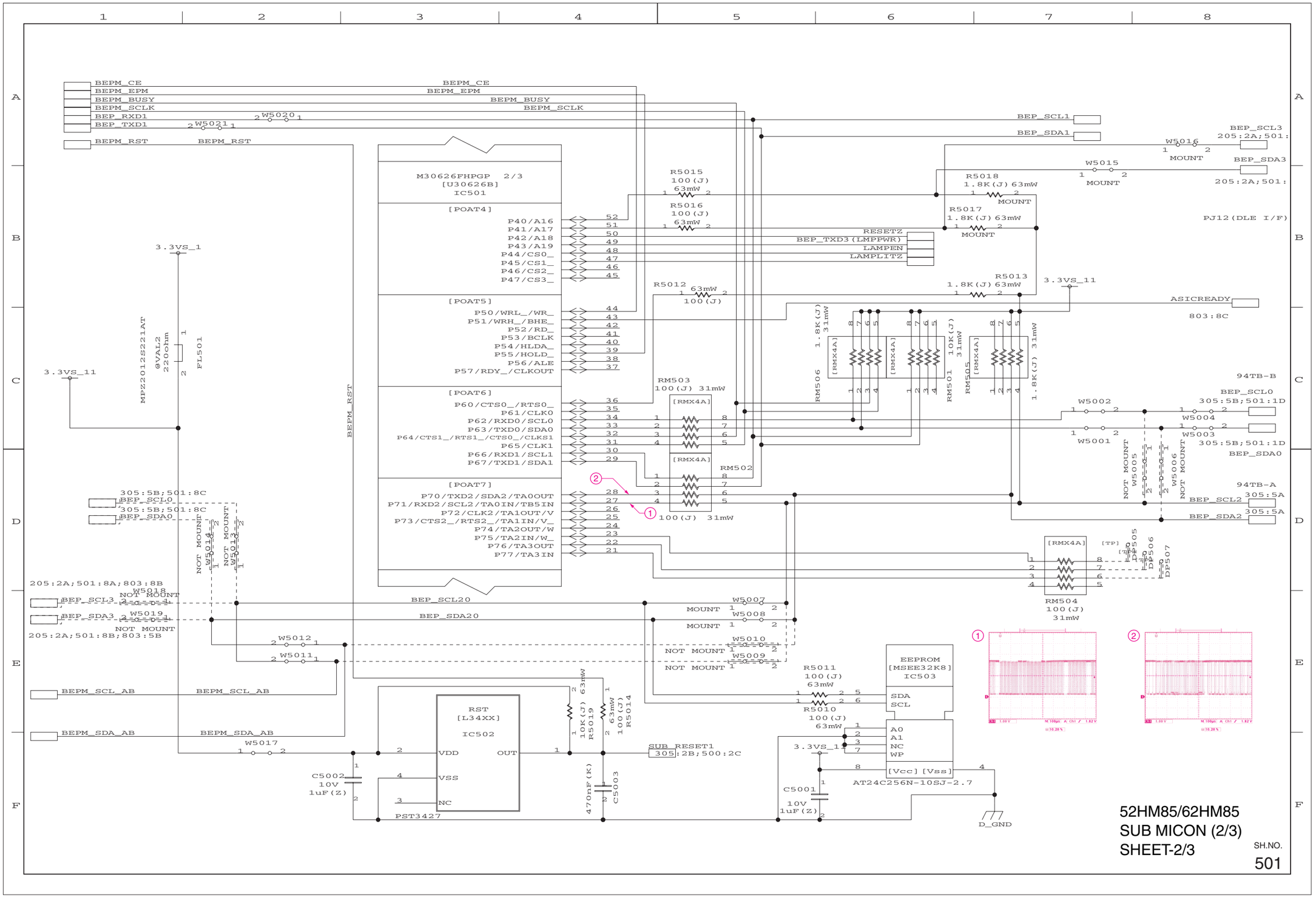
52HM85/62HM85
DC/DC CONVERTER

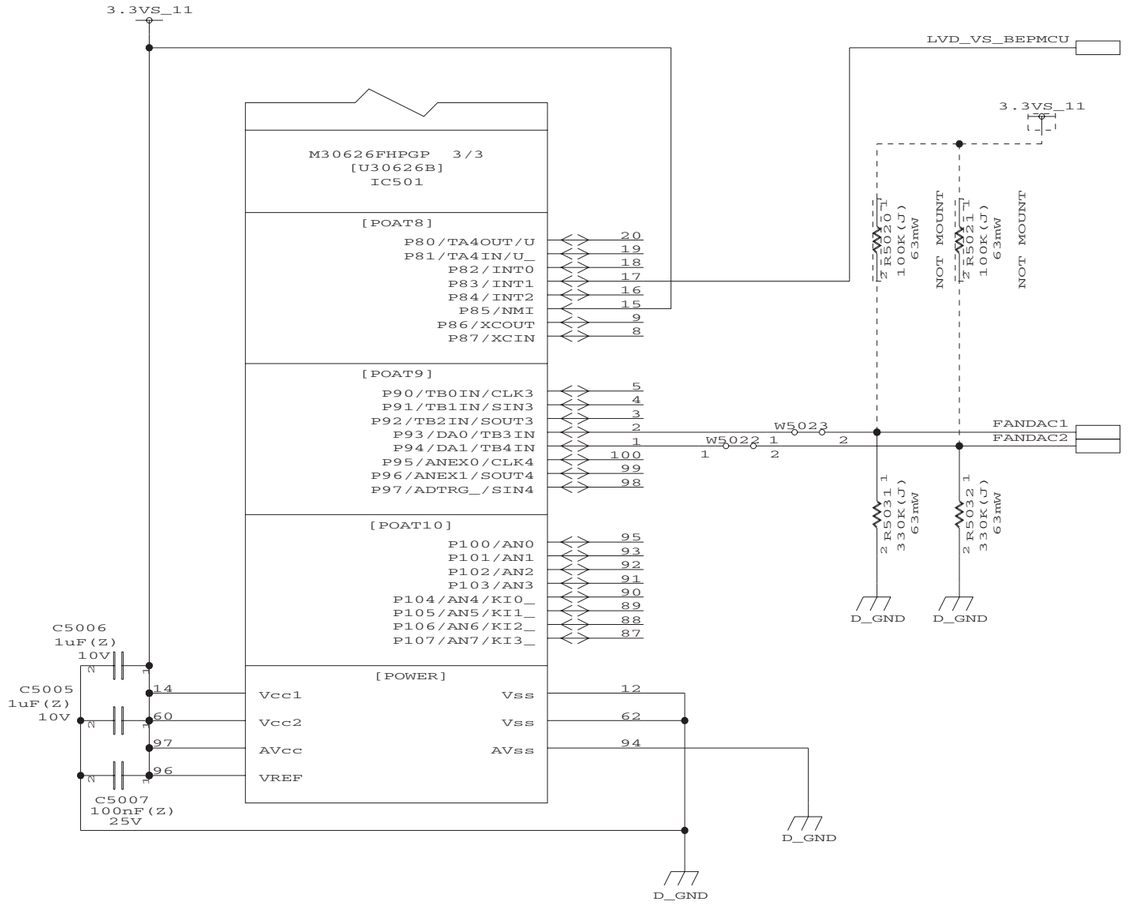
SH.NO.
310



52HM85/62HM85
SUB MICON (1/3)
SHEET-1/3

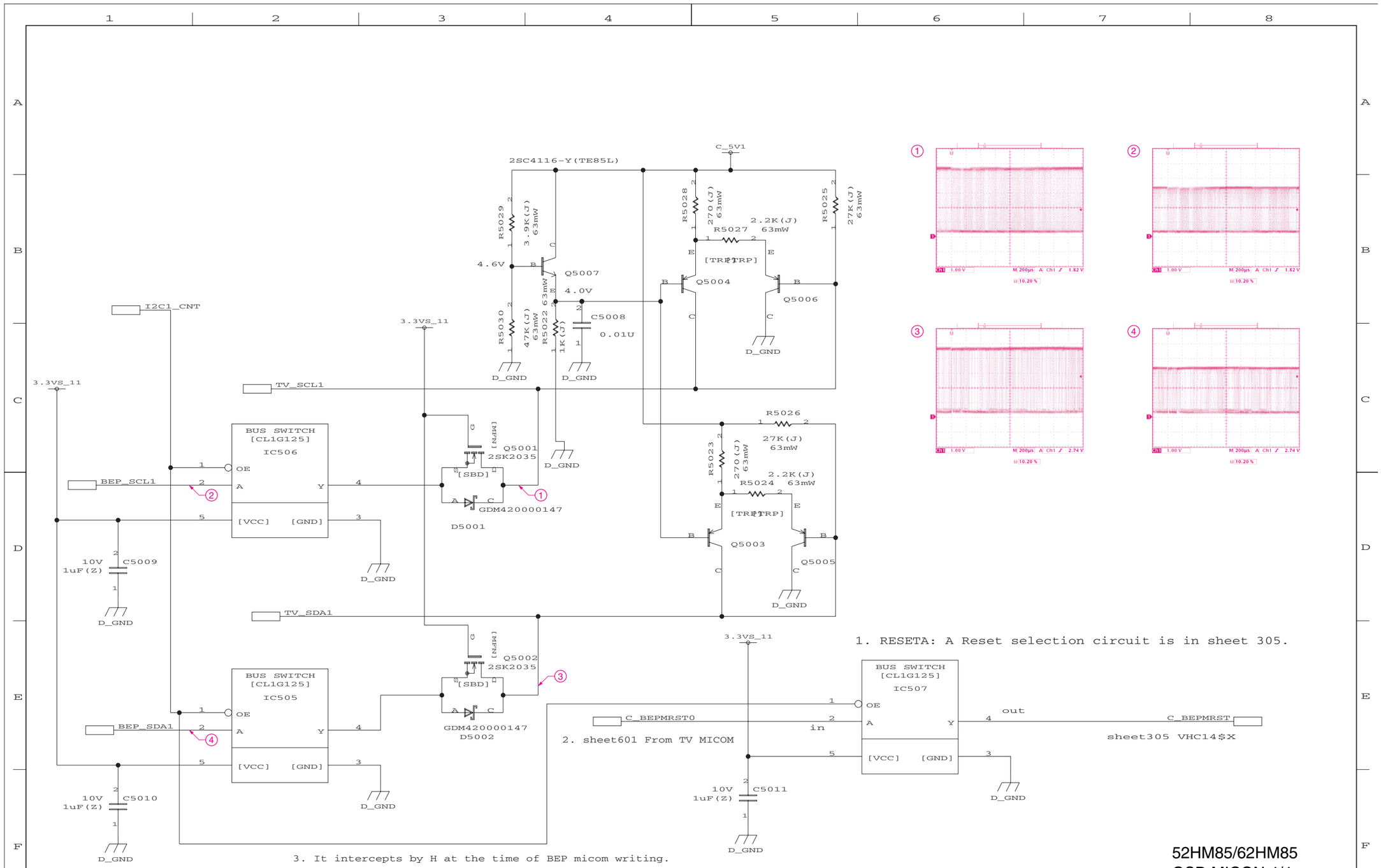
SH.NO.
500


BEPM_CE
BEPM_EPM
BEPM_BUSY
BEPM_SCLK
BEP_RXD1
BEP_TXD1
W5021
W5020
BEPM_RST
M30626FHPGP 2/3
[U30626B]
IC501
[POAT4]
P40/A16
P41/A17
P42/A18
P43/A19
P44/CS0_
P45/CS1_
P46/CS2_
P47/CS3_
[POAT5]
P50/WRL_/WR_
P51/WRH_/BHE_
P52/RD_
P53/BCLK
P54/HLDA_
P55/HOLD_
P56/ALE
P57/RDY_/CLKOUT
[POAT6]
P60/CTS0_/RTS0_
P61/CLK0
P62/RXD0/SCL0
P63/TXD0/SDA0
P64/CTS1_/RTS1_/CTS0_/CLKS1
P65/CLK1
P66/RXD1/SCL1
P67/TXD1/SDA1
[POAT7]
P70/TXD2/SDA2/TA0OUT
P71/RXD2/SCL2/TA0IN/TB5IN
P72/CLK2/TA1OUT/V
P73/CTS2_/RTS2_/TA1IN/V_
P74/TA2OUT/W
P75/TA2IN/W_
P76/TA3OUT
P77/TA3IN
R5015 100(J) 63mW
R5016 100(J) 63mW
R5012 63mW 100(J)
RESETZ
BEP_TXD3(LMPPWR)
LAMPEN
LAMPLITZ
BEP_SCL1
BEP_SDA1
R5018 1.8K(J) 63mW MOUNT
R5017 1.8K(J) 63mW MOUNT
R5013 1.8K(J) 63mW
3.3VS_11
ASICREADY
803:8C
W5016 MOUNT
W5015 MOUNT
BEP_SCL3
205:2A;501:
BEP_SDA3
205:2A;501:
PJ12(DLE I/F)
RM503 100(J) 31mW
RM502 100(J) 31mW
RM506 1.8K(J) 31mW
RM501 10K(J) 31mW
RM505 1.8K(J) 31mW
[RMX4A]
94TB-B
BEP_SCL0
305:5B;501:1D
BEP_SDA0
W5002
W5004
W5001
W5003
NOT MOUNT W5005
NOT MOUNT W5006
94TB-A
BEP_SCL2
305:5A
BEP_SDA2
305:5A
RM504 100(J) 31mW
[TP] DP505 DP506 DP507
3.3VS_1
MPZ2012S221AT
@VAL2 220ohm
FL501
3.3VS_11
BEPM_RST
305:5B;501:8C
BEP_SCL0
305:5B;501:8C
BEP_SDA0
NOT MOUNT W5014
NOT MOUNT W5013
205:2A;501:8A;803:8B
BEP_SCL3
W5018 NOT MOUNT
BEP_SDA3
W5019 NOT MOUNT
205:2A;501:8B;803:5B
BEP_SCL20
BEP_SDA20
W5007 MOUNT
W5008 MOUNT
W5010 NOT MOUNT
W5009 NOT MOUNT
W5012
W5011
BEPM_SCL_AB
BEPM_SDA_AB
W5017
RST
[L34XX]
IC502
VDD
OUT
VSS
NC
PST3427
C5002 10V 1uF(Z)
10K(J) R5019
100(J) 63mW R5014
470nF(K) C5003
SUB_RESET1
305:2B;500:2C
R5011 100(J) 63mW
R5010 100(J) 63mW
EEPROM
[MSEE32K8]
IC503
SDA
SCL
A0
A1
NC
WP
[Vcc] [Vss]
AT24C256N-10SJ-2.7
C5001 10V 1uF(Z)
D_GND
52HM85/62HM85
SUB MICON (2/3)
SHEET-2/3
SH.NO.
501



52HM85/62HM85
SUB MICON (3/3)
SHEET-3/3

SH.NO.
502

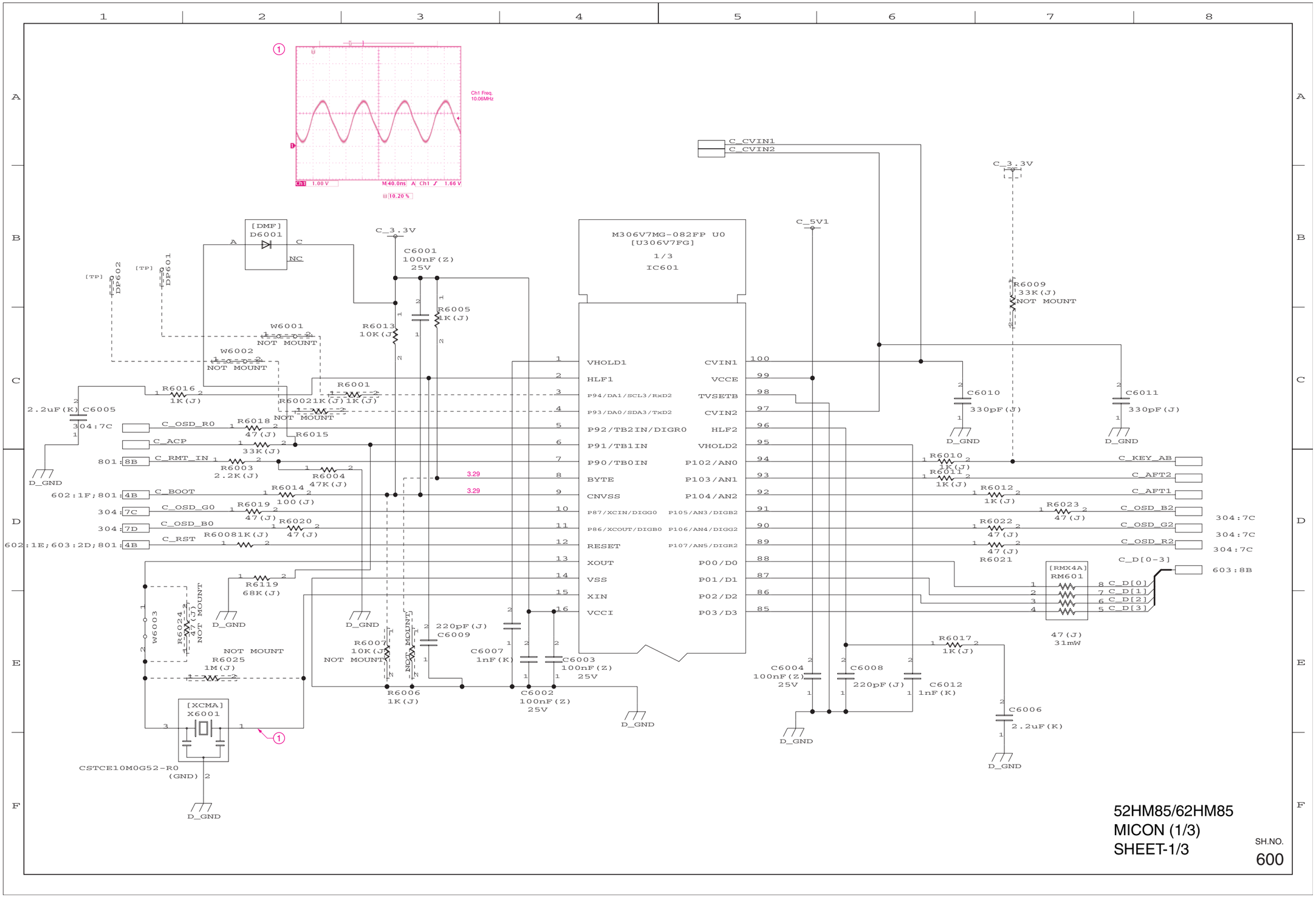

2SC4116-Y(TE85L)
C_5V1
R5029 3.9K(J) 63mW
R5028 270(J) 63mW
R5027 2.2K(J) 63mW
R5025 27K(J) 63mW
4.6V
Q5007
4.0V
Q5004
Q5006
R5030 47K(J) 63mW
R5022 1K(J) 63mW
C5008 0.01U
D_GND
I2C1_CNT
3.3VS_11
TV_SCL1
BUS SWITCH [CL1G125] IC506
OE
A
Y
[VCC]
[GND]
BEP_SCL1
Q5001 2SK2035
[MPN]
[SBD]
GDM4420000147
D5001
R5026 27K(J) 63mW
R5023 270(J) 63mW
R5024 2.2K(J) 63mW
Q5003
Q5005
C5009 10V 1uF(Z)
TV_SDA1
Q5002 2SK2035
D5002
BUS SWITCH [CL1G125] IC505
BEP_SDA1
C5010 10V 1uF(Z)
3.3VS_11
BUS SWITCH [CL1G125] IC507
C_BEPMRST0
in
out
C_BEPMRST
sheet305 VHC14$X
C5011 10V 1uF(Z)
1. RESETA: A Reset selection circuit is in sheet 305.
2. sheet601 From TV MICOM
3. It intercepts by H at the time of BEP micom writing.
52HM85/62HM85
OSD MICON 4/4
SH.NO.
503

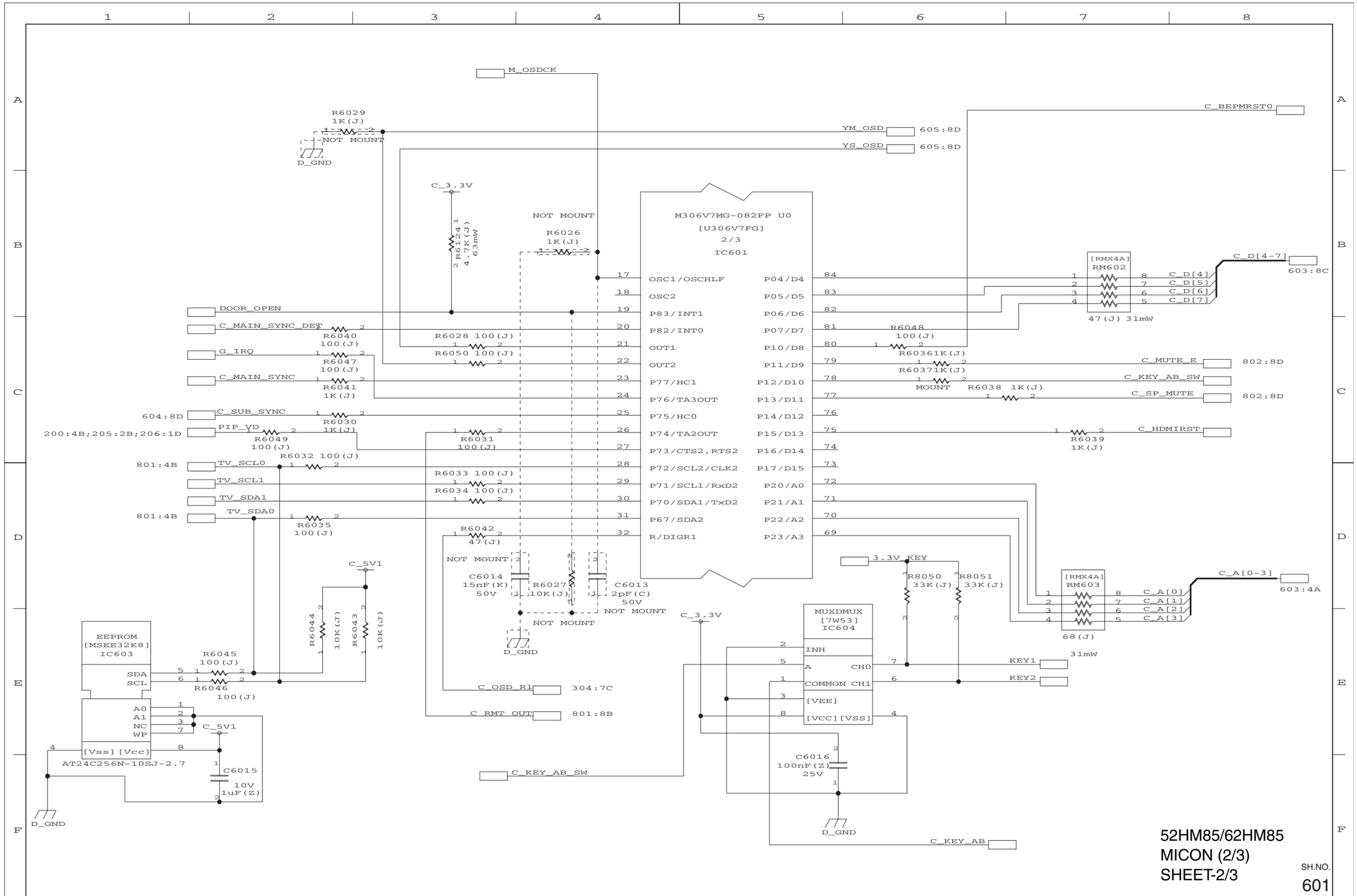
1.00 V
M 200µs A Ch1 1.82 V
10.20 %

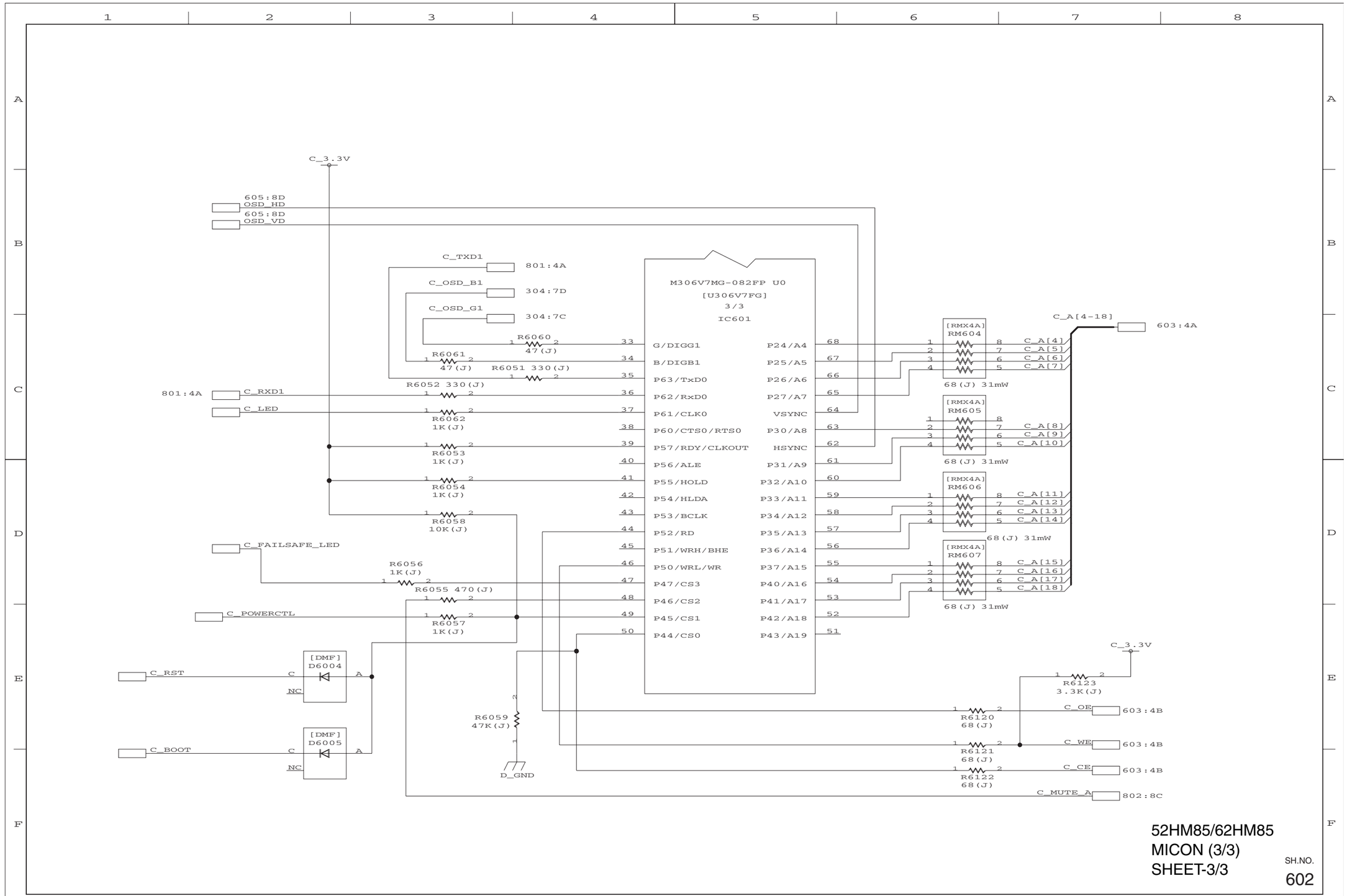
1.00 V
M 200µs A Ch1 1.82 V
10.20 %

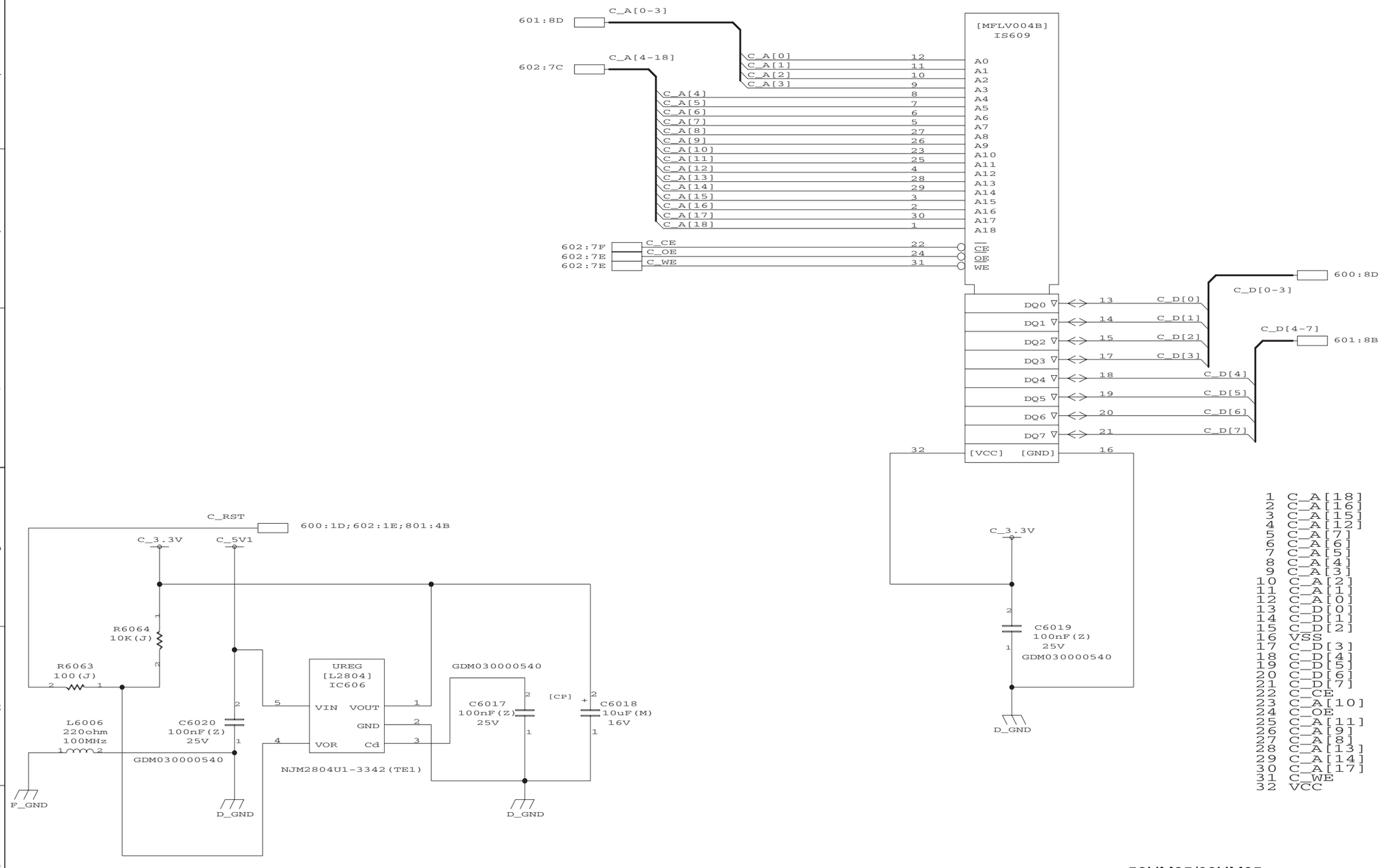
1.00 V
M 200µs A Ch1 2.74 V
10.20 %

1.00 V
M 200µs A Ch1 2.74 V
10.20 %


1
Ch1 Freq.
10.06MHz
Ch1 1.00 V
M40.0ns A Ch1 1.66 V
10.20 %
[DMF]
D6001
A
C
NC
C_3.3V
C6001
100nF(Z)
25V
[TP]
DP602
[TP]
DP601
W6001
NOT MOUNT
W6002
NOT MOUNT
R6013
10K(J
R6005
1K(J)
R6016
1K(J)
R6001
R60021K(J)1K(J)
2.2uF(K) C6005
304:7C
C_OSD_R0
R6018
47(J)
C_ACP
R6015
33K(J)
801:8B
C_RMT_IN
R6003
2.2K(J)
R6004
47K(J)
602:1F;801:4B
C_BOOT
R6014
100(J)
304:7C
C_OSD_G0
R6019
47(J)
304:7D
C_OSD_B0
R6020
47(J)
602:1E;603:2D;801:4B
C_RST
R60081K(J)
D_GND
R6119
68K(J)
W6003
R6024
47(J)
NOT MOUNT
NOT MOUNT
R6025
1M(J)
[XCMA]
X6001
CSTCE10M0G52-R0
(GND)
R6007
10K(J)
NOT MOUNT
NOT MOUNT
R6006
1K(J)
220pF(J)
C6009
C6007
1nF(K)
C6003
100nF(Z)
25V
C6002
100nF(Z)
25V
3.29
3.29
M306V7MG-082FP U0
[U306V7FG]
1/3
IC601
1 VHOLD1
2 HLF1
3 P94/DA1/SCL3/RxD2
4 P93/DA0/SDA3/TxD2
5 P92/TB2IN/DIGR0
6 P91/TB1IN
7 P90/TB0IN
8 BYTE
9 CNVSS
10 P87/XCIN/DIGG0
11 P86/XCOUT/DIGB0
12 RESET
13 XOUT
14 VSS
15 XIN
16 VCCI
100 CVIN1
99 VCCE
98 TVSETB
97 CVIN2
96 HLF2
95 VHOLD2
94 P102/AN0
93 P103/AN1
92 P104/AN2
91 P105/AN3/DIGB2
90 P106/AN4/DIGG2
89 P107/AN5/DIGR2
88 P00/D0
87 P01/D1
86 P02/D2
85 P03/D3
C_CVIN1
C_CVIN2
C_5V1
C_3.3V
R6009
33K(J)
NOT MOUNT
C6010
330pF(J)
C6011
330pF(J)
D_GND
R6010
1K(J)
R6011
1K(J)
R6012
1K(J)
R6023
47(J)
R6022
47(J)
R6021
47(J)
C_KEY_AB
C_AFT2
C_AFT1
C_OSD_B2
C_OSD_G2
C_OSD_R2
304:7C
304:7C
304:7C
C_D[0-3]
603:8B
[RMX4A]
RM601
8 C_D[0]
7 C_D[1]
6 C_D[2]
5 C_D[3]
47(J)
31mW
R6017
1K(J)
C6004
100nF(Z)
25V
C6008
220pF(J)
C6012
1nF(K)
C6006
2.2uF(K)
52HM85/62HM85
MICON (1/3)
SHEET-1/3
SH.NO.
600

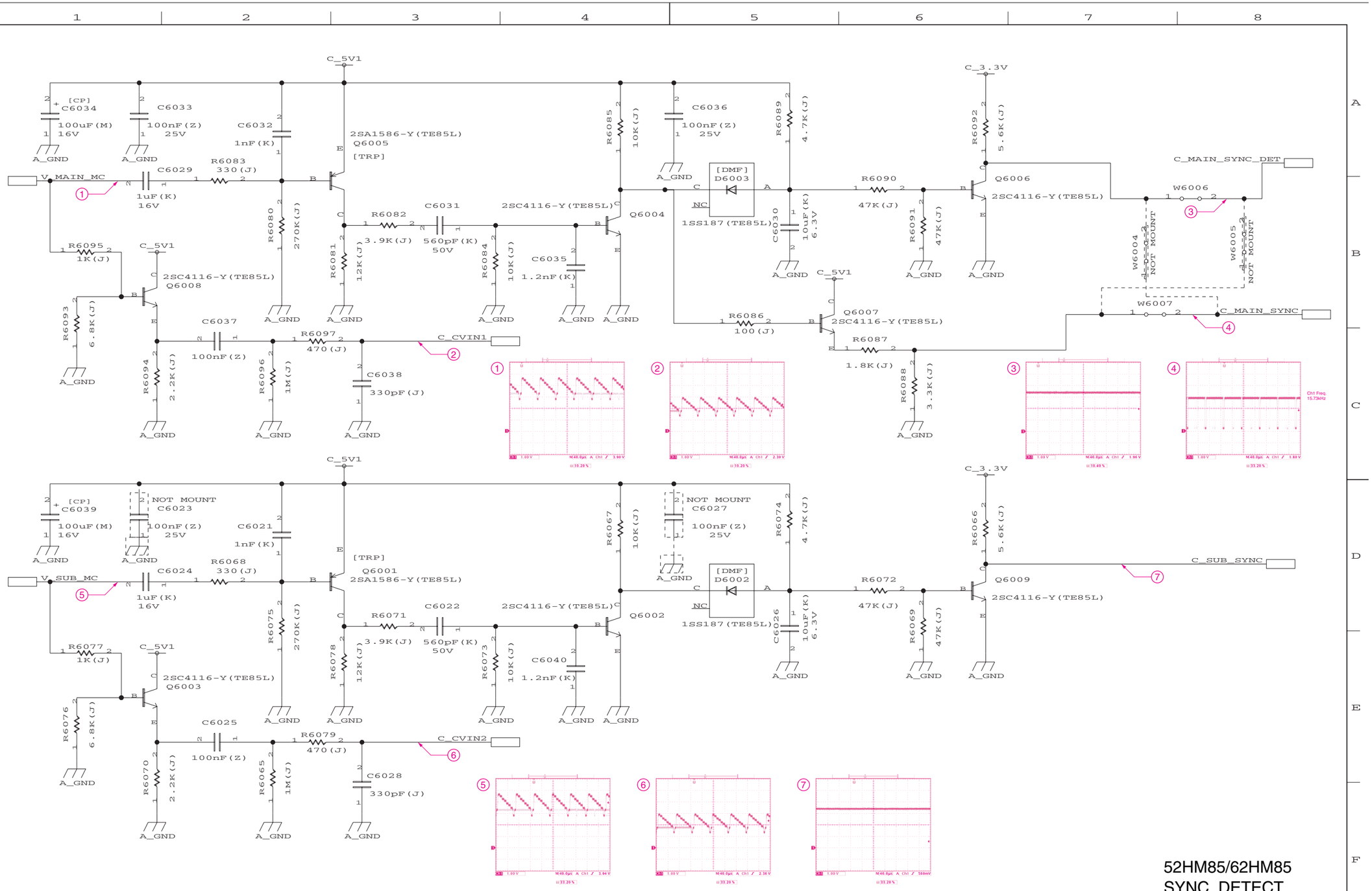

M_OSDCK
R6029
1K(J)
NOT MOUNT
D_GND
YM_OSD
605:8D
YS_OSD
605:8D
C_BEPMRST0
C_3.3V
R6124
4.7K(J)
63mW
NOT MOUNT
R6026
1K(J)
M306V7MG-082FP U0
[U306V7FG]
2/3
IC601
[RMX4A]
RM602
C_D[4-7]
603:8C
C_D[4]
C_D[5]
C_D[6]
C_D[7]
47(J) 31mW
DOOR_OPEN
C_MAIN_SYNC_DET
R6040
100(J)
R6028 100(J)
R6050 100(J)
G_IRQ
R6047
100(J)
C_MAIN_SYNC
R6041
1K(J)
604:8D
C_SUB_SYNC
R6030
1K(J)
200:4B;205:2B;206:1D
PIP_VD
R6049
100(J)
R6032 100(J)
801:4B
TV_SCL0
TV_SCL1
TV_SDA1
801:4B
TV_SDA0
R6035
100(J)
R6031
100(J)
R6033 100(J)
R6034 100(J)
R6042
47(J)
NOT MOUNT
C6014
15nF(K)
50V
R6027
10K(J)
C6013
2pF(C)
50V
NOT MOUNT
NOT MOUNT
D_GND
C_OSD_R1
304:7C
C_RMT_OUT
801:8B
C_KEY_AB_SW
R6048
100(J)
R60361K(J)
R60371K(J)
MOUNT
R6038 1K(J)
C_MUTE_E
802:8D
C_KEY_AB_SW
C_SP_MUTE
802:8D
C_HDMIRST
R6039
1K(J)
3.3V_KEY
R8050
33K(J)
R8051
33K(J)
[RMX4A]
RM603
C_A[0-3]
603:4A
C_A[0]
C_A[1]
C_A[2]
C_A[3]
68(J)
31mW
KEY1
KEY2
MUXDMUX
[7W53]
IC604
INH
A
CH0
COMMON
CH1
[VEE]
[VCC]
[VSS]
C6016
100nF(Z)
25V
D_GND
C_KEY_AB
EEPROM
[MSEE32K8]
IC603
SDA
SCL
R6045
100(J)
R6046
100(J)
R6044
10K(J)
R6043
10K(J)
C_5V1
A0
A1
NC
WP
[Vss]
[Vcc]
AT24C256N-10SJ-2.7
C_5V1
C6015
10V
1uF(Z)
D_GND
P04/D4
P05/D5
P06/D6
P07/D7
P10/D8
P11/D9
P12/D10
P13/D11
P14/D12
P15/D13
P16/D14
P17/D15
P20/A0
P21/A1
P22/A2
P23/A3
OSC1/OSCHLF
OSC2
P83/INT1
P82/INT0
OUT1
OUT2
P77/HC1
P76/TA3OUT
P75/HC0
P74/TA2OUT
P73/CTS2,RTS2
P72/SCL2/CLK2
P71/SCL1/RxD2
P70/SDA1/TxD2
P67/SDA2
R/DIGR1
52HM85/62HM85
MICON (2/3)
SHEET-2/3
SH.NO.
601


C_3.3V
605:8D
OSD_HD
605:8D
OSD_VD
C_TXD1
801:4A
C_OSD_B1
304:7D
C_OSD_G1
304:7C
R6060
47(J)
R6061
47(J)
R6051 330(J)
R6052 330(J)
801:4A
C_RXD1
C_LED
R6062
1K(J)
R6053
1K(J)
R6054
1K(J)
R6058
10K(J)
C_FAILSAFE_LED
R6056
1K(J)
R6055 470(J)
C_POWERCTL
R6057
1K(J)
C_RST
C_BOOT
[DMF]
D6004
[DMF]
D6005
NC
R6059
47K(J)
D_GND
M306V7MG-082FP U0
[U306V7FG]
3/3
IC601
G/DIGG1
B/DIGB1
P63/TxD0
P62/RxD0
P61/CLK0
P60/CTS0/RTS0
P57/RDY/CLKOUT
P56/ALE
P55/HOLD
P54/HLDA
P53/BCLK
P52/RD
P51/WRH/BHE
P50/WRL/WR
P47/CS3
P46/CS2
P45/CS1
P44/CS0
P24/A4
P25/A5
P26/A6
P27/A7
VSYNC
P30/A8
HSYNC
P31/A9
P32/A10
P33/A11
P34/A12
P35/A13
P36/A14
P37/A15
P40/A16
P41/A17
P42/A18
P43/A19
[RMX4A]
RM604
[RMX4A]
RM605
[RMX4A]
RM606
[RMX4A]
RM607
68(J) 31mW
C_A[4-18]
603:4A
C_A[4]
C_A[5]
C_A[6]
C_A[7]
C_A[8]
C_A[9]
C_A[10]
C_A[11]
C_A[12]
C_A[13]
C_A[14]
C_A[15]
C_A[16]
C_A[17]
C_A[18]
C_3.3V
R6123
3.3K(J)
R6120
68(J)
R6121
68(J)
R6122
68(J)
C_OE
C_WE
C_CE
603:4B
C_MUTE_A
802:8C
52HM85/62HM85
MICON (3/3)
SHEET-3/3
SH.NO.
602



52HM85/62HM85
TV MICON RESET IC & FLASH

SH.NO.
603


C_5V1
C6034 [CP] 100uF(M) 16V
C6033 100nF(Z) 25V
C6032 1nF(K)
2SA1586-Y(TE85L) Q6005 [TRP]
R6085 10K(J)
C6036 100nF(Z) 25V
R6089 4.7K(J)
C_3.3V
R6092 5.6K(J)
C_MAIN_SYNC_DET
V_MAIN_MC
C6029 1uF(K) 16V
R6083 330(J)
R6080 270K(J)
R6082 3.9K(J)
C6031 560pF(K) 50V
2SC4116-Y(TE85L) Q6004
[DMF] D6003
1SS187(TE85L)
C6030 10uF(K) 6.3V
R6090 47K(J)
Q6006 2SC4116-Y(TE85L)
W6006
W6004 NOT MOUNT
W6005 NOT MOUNT
R6095 1K(J)
2SC4116-Y(TE85L) Q6008
R6081 12K(J)
R6084 10K(J)
C6035 1.2nF(K)
R6091 47K(J)
W6007
C_MAIN_SYNC
R6086 100(J)
Q6007 2SC4116-Y(TE85L)
R6087 1.8K(J)
R6093 6.8K(J)
C6037 100nF(Z)
R6097 470(J)
C_CVIN1
R6094 2.2K(J)
R6096 1M(J)
C6038 330pF(J)
R6088 3.3K(J)
A_GND
C_5V1
C6039 [CP] 100uF(M) 16V
NOT MOUNT C6023 100nF(Z) 25V
C6021 1nF(K)
[TRP] Q6001 2SA1586-Y(TE85L)
R6067 10K(J)
NOT MOUNT C6027 100nF(Z) 25V
R6074 4.7K(J)
C_3.3V
R6066 5.6K(J)
C_SUB_SYNC
V_SUB_MC
C6024 1uF(K) 16V
R6068 330(J)
R6075 270K(J)
R6071 3.9K(J)
C6022 560pF(K) 50V
2SC4116-Y(TE85L) Q6002
[DMF] D6002
1SS187(TE85L)
C6026 10uF(K) 6.3V
R6072 47K(J)
Q6009 2SC4116-Y(TE85L)
R6077 1K(J)
2SC4116-Y(TE85L) Q6003
R6078 12K(J)
R6073 10K(J)
C6040 1.2nF(K)
R6069 47K(J)
R6076 6.8K(J)
C6025 100nF(Z)
R6079 470(J)
C_CVIN2
R6070 2.2K(J)
R6065 1M(J)
C6028 330pF(J)
52HM85/62HM85
SYNC_DETECT
SH.NO.
604

LVD_HS
LVD_VS
500:7B
HIRA_HYPER

3.3VS_11

[CN6]
PJ104
TCK 1
TDO 2
3.3V 3
TMS 4
TDI 5
GND 6

GDM220000972

W6008

L6005
L6001
L6002
L6003
L6004
L6008
22ohm
100MHz
NOT MOUNT

F_GND

04:7D OSD_CLK

to BEP uCOM

304:7D HIRA_HD
304:7D HIRA_VD
304:7D YM_BEP_IN
304:1D YS_BEP_IN

804:8D CNFLG

R6110 10K(J)

R6106 33
R6107 33
R6104 33
R6105 33

R6103 4.7K(J)

NOT MOUNT
R6128 4.7K(J)
R6126 4.7K(J)
R6102 4.7K(J)
R6100 4.7K(J)
R6101 4.7K(J)

R6127 4.7K(J)
R6125 4.7K(J)
R6113 4.7K(J)
R6111 4.7K(J)
R6114 4.7K(J)
R6112 4.7K(J)

C6042 100nF(Z)
C6043 100nF(Z)
C6041 100nF(Z)
C6044 100nF(Z)

D_GND

PLD
[G3064]
IC607

37	GCLK1	I/O	44
38	OE1	I/O	43
39	GCLRn	I/O	42
40	GCLK2	I/O	35
1	I/O/TDI	I/O	34
2	I/O	I/O	33
3	I/O	TDO/I/O	32
5	I/O	I/O	31
6	I/O	I/O	28
7	I/O	I/O	27
8	I/O/TMS	I/O	26
10	I/O	TCK/I/O	25
12	I/O	I/O	23
13	I/O	I/O	22
14	I/O	I/O	21
N.C. 15	I/O	I/O	20
N.C. 18	I/O	I/O	19 N.C.
9	[VCC]	[GND]	4
17	[VCC]	[GND]	11
29	[VCC]	[GND]	16
41	[VCC]	[GND]	24
		[GND]	30
		[GND]	36

R6130 4.7K(J) NOT MOUNT
R6098 4.7K(J) NOT MOUNT
R6099 4.7K(J) NOT MOUNT
R6118 4.7K(J) NOT MOUNT

R6129 4.7K(J)
R6117 4.7K(J)
R6116 4.7K(J)
R6115 4.7K(J)

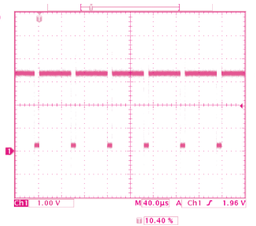
503:1B I2C1_CNT

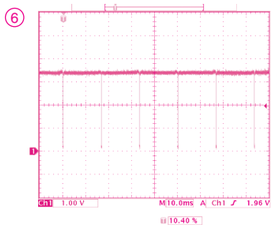
to MAIN uCOM

602:2B OSD_VD
602:2B OSD_HD

R6108 100(J) 601:6A YM_OSD
R6109 100(J) 601:6A YS_OSD
R6112 100(J) 601:3A M_OSDCK

HD:3us PDP/70MHz -> 70h
LCD/65MHz -> 70h

⑤


⑥


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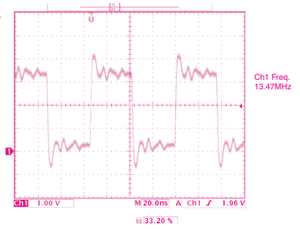
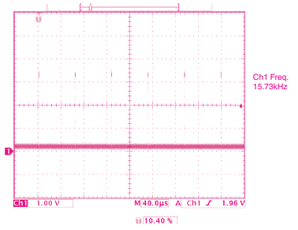
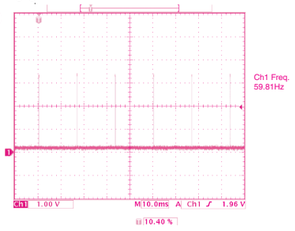


②


③


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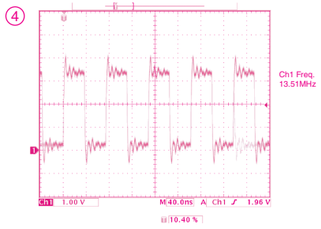
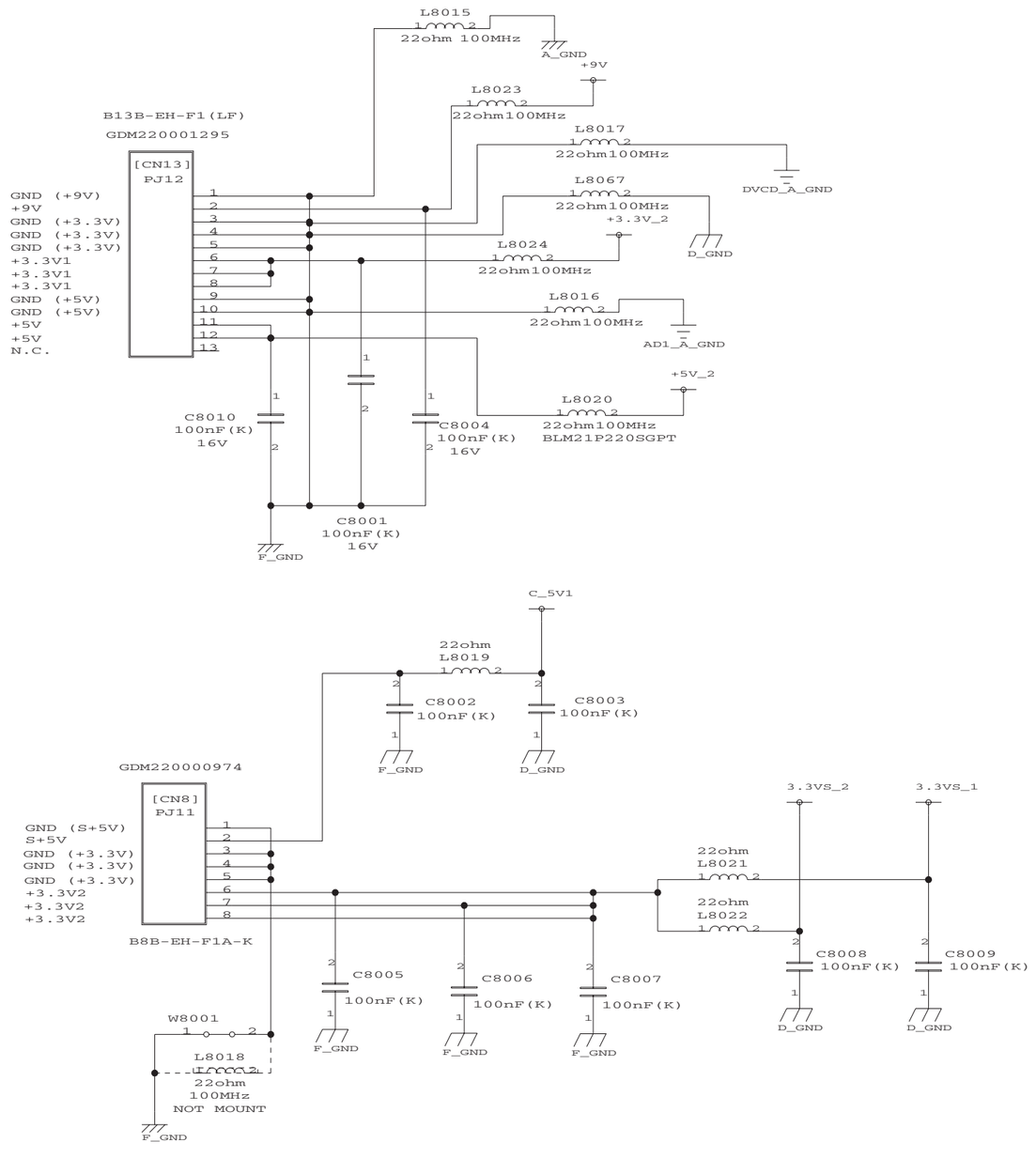


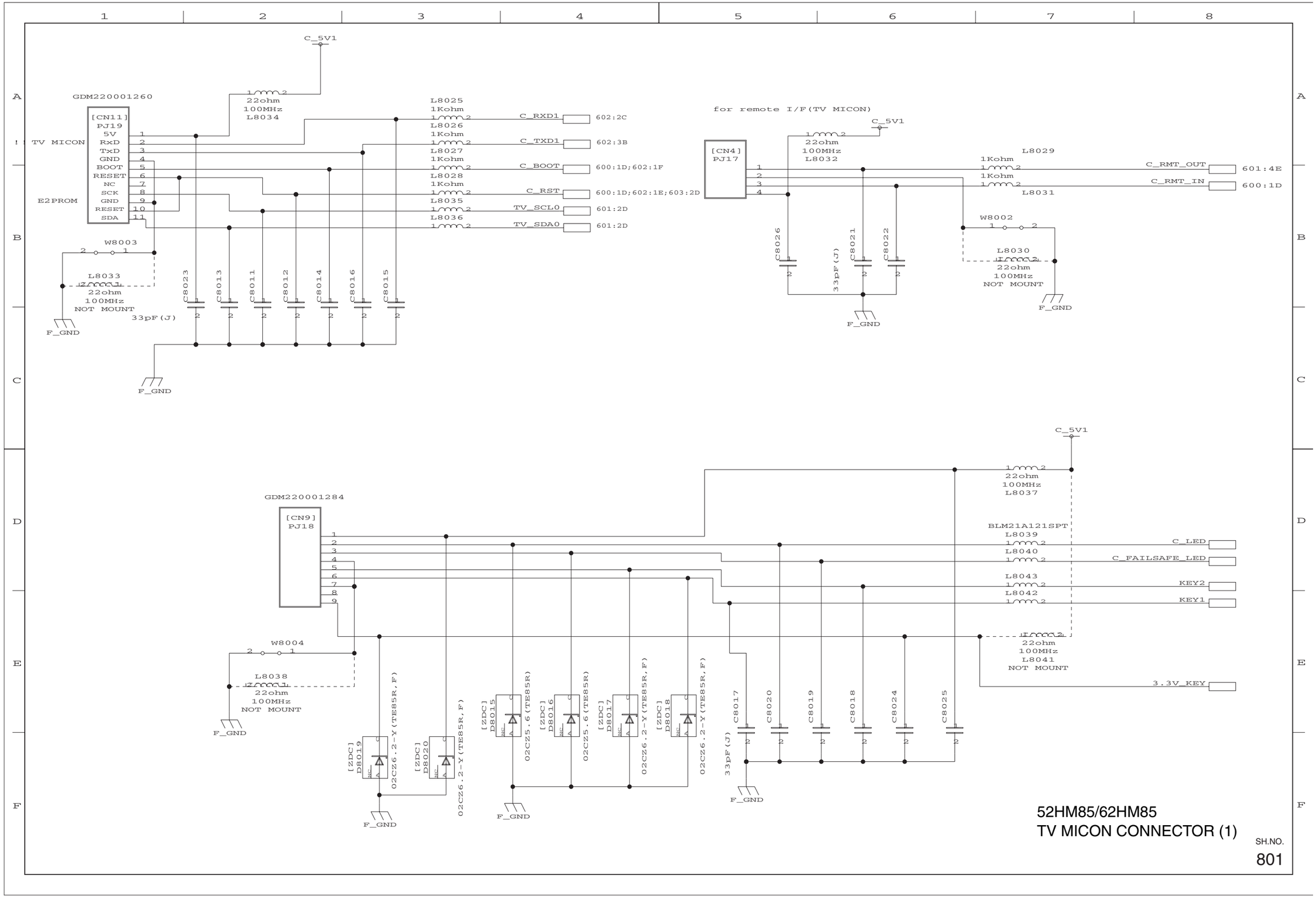
52HM85/62HM85
PLD (US OSD SYNC Generator)

SH.NO.
605



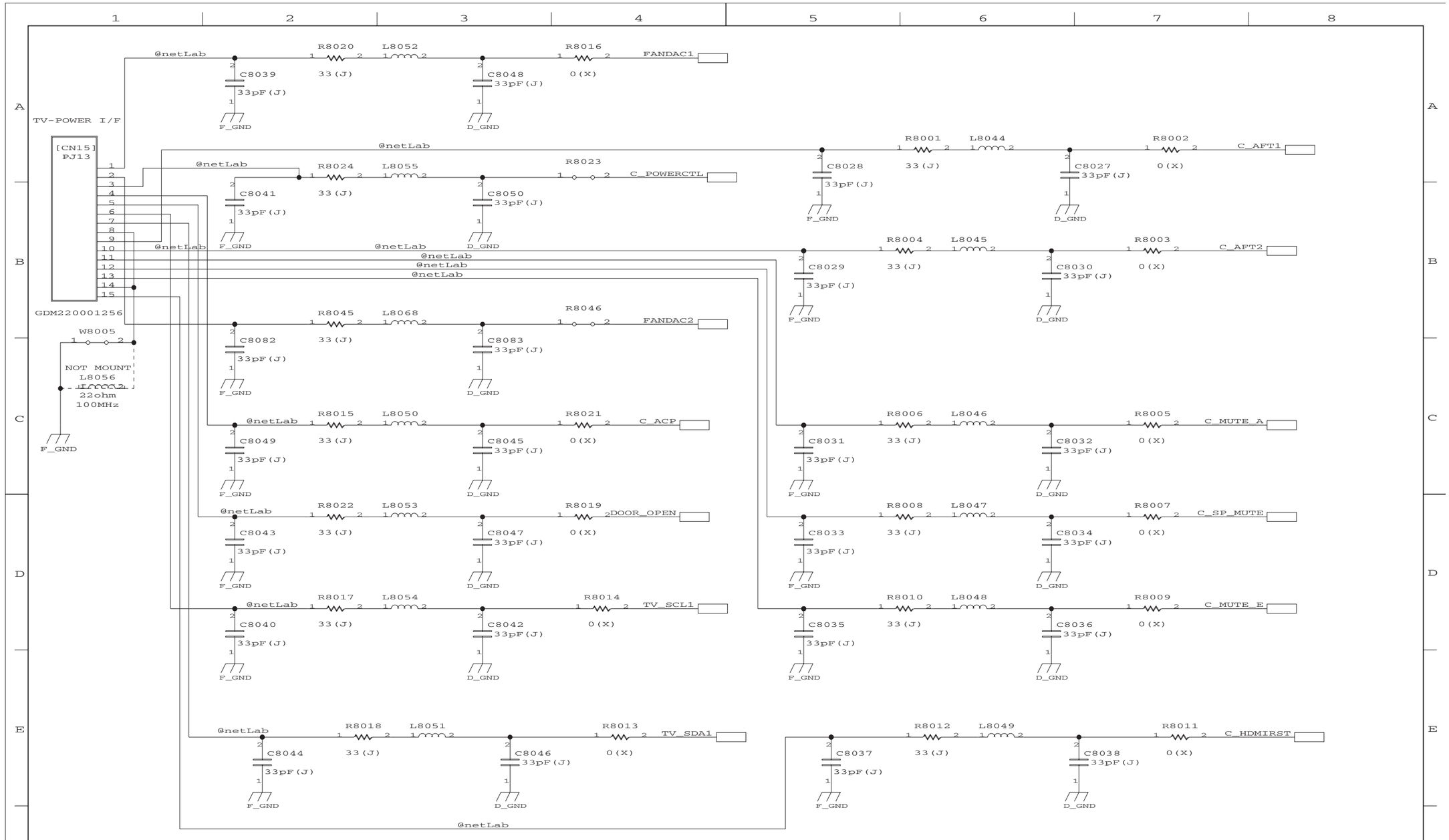
52HM85/62HM85
POWER_CONNECTOR

SH.NO.
800



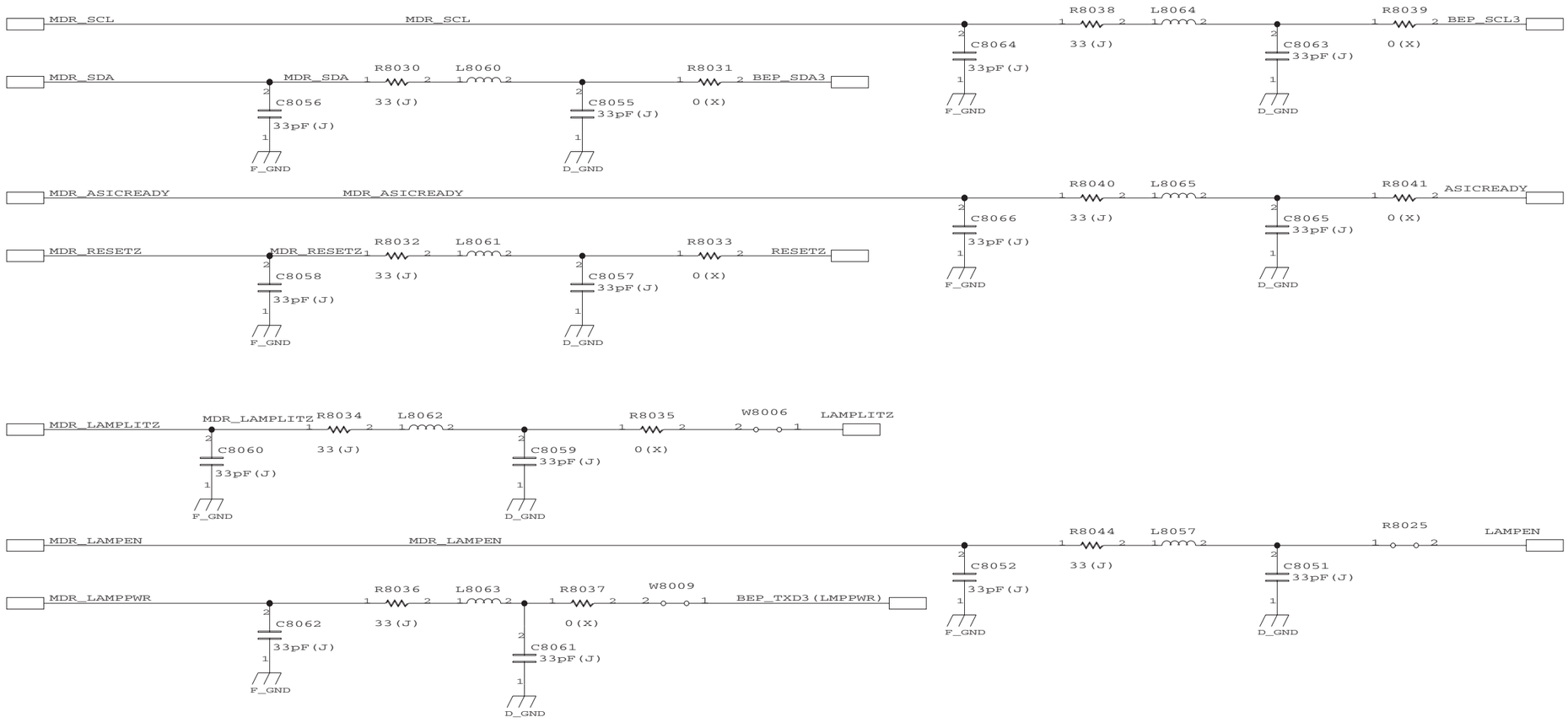
52HM85/62HM85
TV MICON CONNECTOR (1)

SH.NO.
801



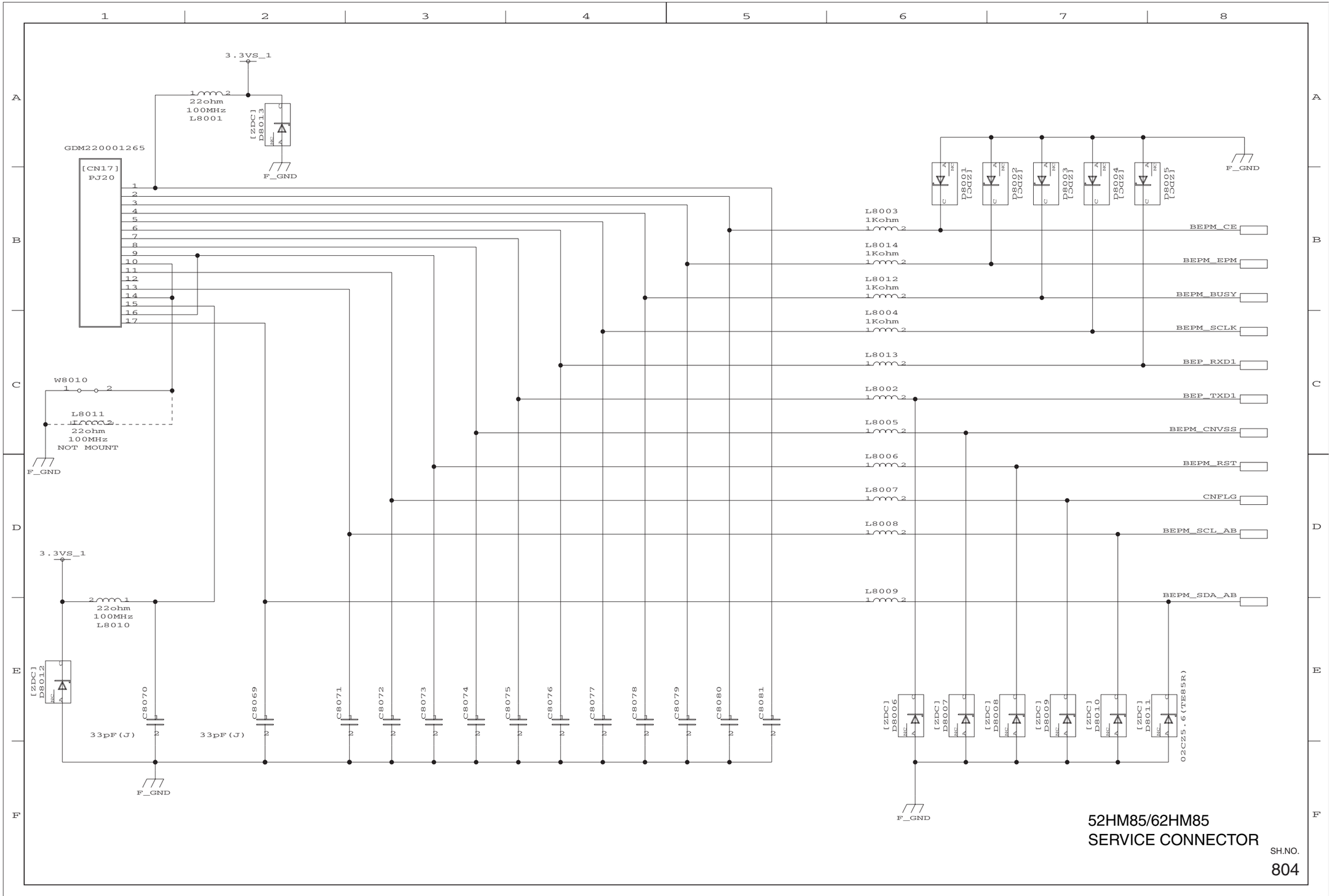
52HM85/62HM85
CONNECTOR (TV MICON-POWER BOARD)

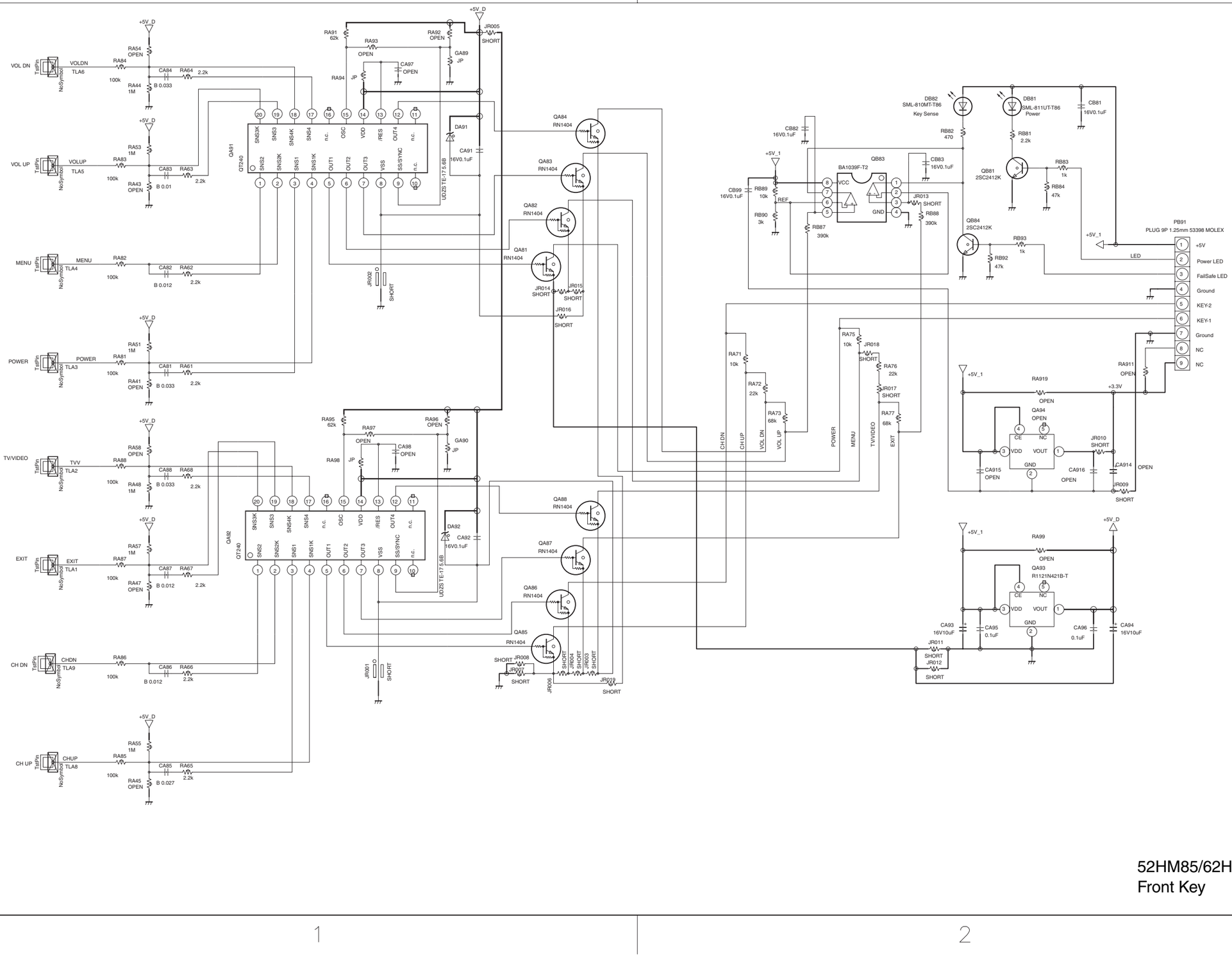
SH.NO.
802



52HM85/62HM85
CONNECTOR (DLF I/F)

SH.NO.
803


3.3VS_1
22ohm
100MHz
L8001
[ZDC]
D8013
F_GND
GDM2200001265
[CN17]
PJ20
W8010
L8011
22ohm
100MHz
NOT MOUNT
F_GND
3.3VS_1
22ohm
100MHz
L8010
[ZDC]
D8012
C8070
33pF(J)
C8069
33pF(J)
C8071
C8072
C8073
C8074
C8075
C8076
C8077
C8078
C8079
C8080
C8081
F_GND
L8003
1Kohm
L8014
1Kohm
L8012
1Kohm
L8004
1Kohm
L8013
L8002
L8005
L8006
L8007
L8008
L8009
[ZDC]
D8001
[ZDC]
D8002
[ZDC]
D8003
[ZDC]
D8004
[ZDC]
D8005
F_GND
BEPM_CE
BEPM_EPM
BEPM_BUSY
BEPM_SCLK
BEP_RXD1
BEP_TXD1
BEPM_CNVSS
BEPM_RST
CNFLG
BEPM_SCL_AB
BEPM_SDA_AB
[ZDC]
D8006
[ZDC]
D8007
[ZDC]
D8008
[ZDC]
D8009
[ZDC]
D8010
[ZDC]
D8011
02CZ5.6(TE85R)
F_GND
52HM85/62HM85
SERVICE CONNECTOR
SH.NO.
804



52HM85/62HM85
Front Key

LIVE AREA

BALLAST POWER

DMD FAN

EXHAUST FAN

DOOR SW

FAN STOP

FAN DAC2

FAN DAC1

G-Hyper.Dbep

12V DMD

3.4V

9V-1

3.4V DMD

2.6V DMD

DMD

DMD

DMD

IF AUDIO

IF AUDIO

HDMI

G-Hyper.Dbep

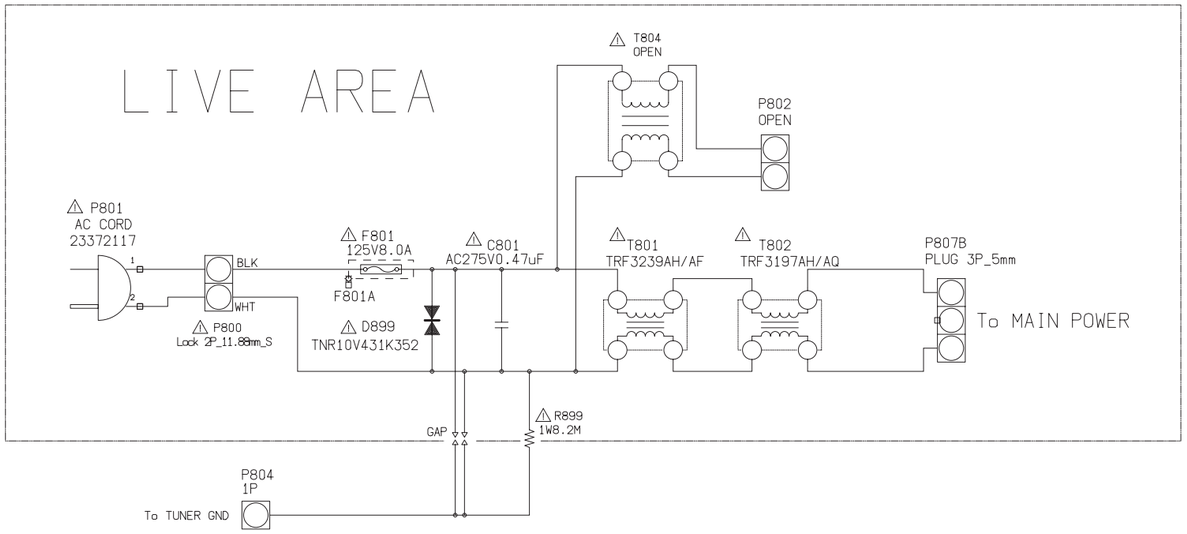
13.5V

5.15V

3.5V

AUDIO

52HM85/62HM85
MAIN POWER



52HM85/62HM85
AC IN

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN